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EDGE

PlayStation ■ Nintendo 64 ■ PC ■ Saturn ■ Arcade ■ Net ■ nuMedia



SCREAMTESTED:

RESIDENT EVIL 2

THE RETURN OF THE LIVING ROOM DEAD





In theory, there's nothing intrinsically wrong with game sequels. As developers wrestle with hardware in an attempt to extract the maximum performance possible within a limited timespan, several elements - be they technical or game related - are inevitably left out. A follow-up offers companies the chance to implement these omissions, exploit more of the machine's abilities and correct any criticism of the original.

Sadly, such utopian methodology is often far from the truth. The majority of sequels fail to significantly push technology further than their predecessors. Rarely do they offer anything relatively new in terms of gameplay, instead relying on the popularity of the first instalment to guarantee commercial success. All too often, the resultant title proves highly disappointing.

Resident Evil 2 is one of the few exceptions to the above depressing statement. It would have been simple for Capcom to release a lax rehash of its genre-defining adventure and revel in sales fuelled by the original's success. Instead, the Japanese codeshop has expended much effort in building a game that is a worthy sequel. The theme may remain the same but Resident Evil 2 boasts higher quality visuals, is better designed, greatly refined, and - crucially - proves more playable than its initial incarnation. Problems in the first game, now revealed by time more than anything else, have been rectified. As a result, Capcom's masterstroke treats players to one of the most immersive, cinematic (and terrifying) experiences ever witnessed in a videogame.

One day, all sequels will be made like this.





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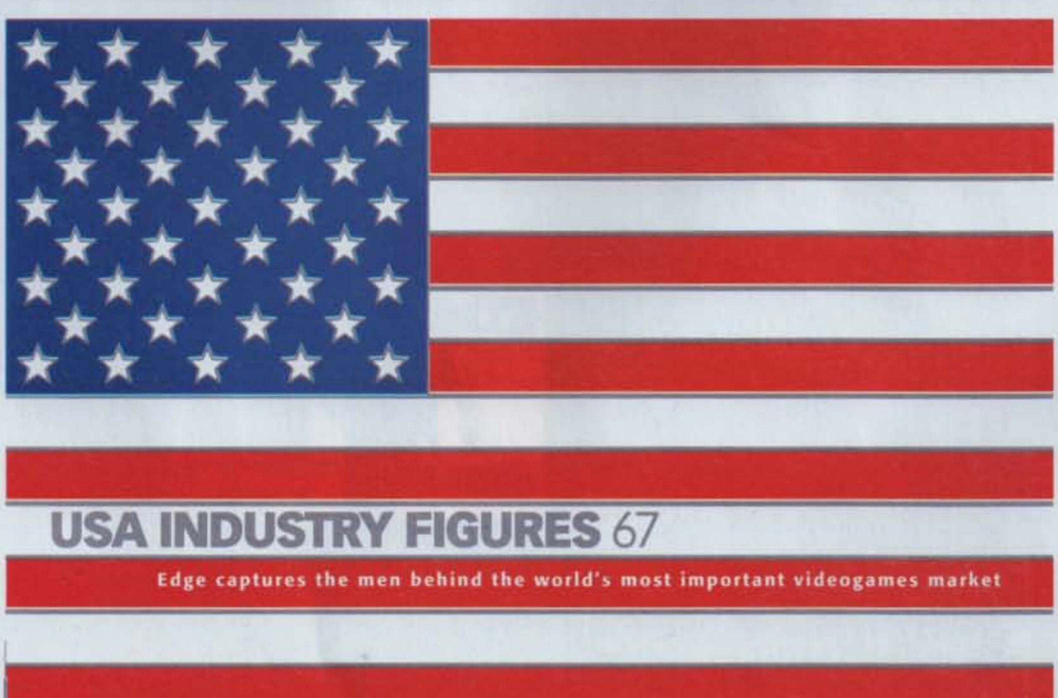
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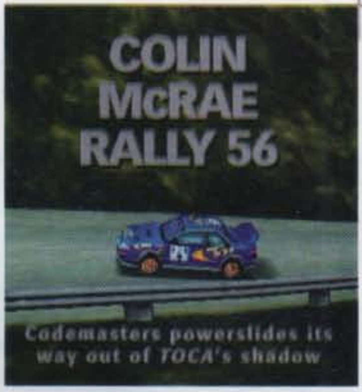






RESIDENT EVIL PHENOMENA 84

What gave birth to Capcom's twisted thriller? Edge digs up the dirt...



COLIN McRAE RALLY 56

Codemasters powerslides its way out of *TOCA's* shadow

TESTSCREEN

The most accurate, definitive videogame reviews in the world





SHOT 52

Voodoo2 visuals get centre-stage in this Finnish blast 'em up

PRESCREEN 31

Edge unveils the finest games first. This month, the N64 gets the lion's share of creative game design



VIEWPOINT

EXPRESS YOURSELF IN **EDGE** – WRITE TO: LETTERS, **EDGE**, 30 MONMOUTH STREET, BATH, BA1 2BW (email: edge@futurenet.co.uk)

I have been an avid **Edge** reader since the first issue, and have always held high regard for the integrity of your reviewers. This was, however, drastically shaken on reading the review of *Gran Turismo* which, I feel, suffers from four fatal flaws:

1. It is based on an unseen product: identified problems are forgiven with SCEE assertions that they will be fixed, implying the PAL version of this game has not been completed and was not what was being reviewed; the substantial manual has yet to be translated into English; and the current atrocious music replaced.

2. It lacked research: 'Racing titles have remained fundamentally the same for the last 20 years'. This beggars belief – racing games have progressed immeasurably in the last 20 years from *Night Driver* (1980) featuring large white blobs to mark the side of the track, to today's fully textured landscapes and cars. The only thing not to change is that they are racing games.

3. It made excuses for the product: the small number of cars is a result of the PlayStation's limitations? You contradict your own argument in the opening editorial, 'technology is only as good as those who are commanding it'. A game is necessarily limited by the technology it runs on. It is up to the game's development team to exploit the features to their fullest.

4. It didn't answer the fundamental question: how does this redefine the concept of racing games?

I cannot fathom how this review was published. I have played the Japanese version of this game and though it looks stunning on replay mode, it suffers from considerable slowdown during play. The game is certainly excellent but does not justify a 'ten out of ten'.

Mark Roberts,
Hampshire

The version of *Gran Turismo* reviewed in **E**55 is the Japanese release and at no time does the review suggest otherwise. As an 'avid **Edge** reader' this should not come as a shock to you. The PAL improvements were mentioned in order to inform readers who might prefer to wait for the game's official May release and not, as your letter implies, as a way of justifying the mark.

Concerning your second point, racing games *have* remained fundamentally the same - it's still a case of getting from start to finish in the shortest amount of time, regardless of how pretty the graphics have become. Your own declaration, 'The only thing not to change is that they are racing games', upholds **Edge**'s argument admirably.

Furthermore, there is nothing contradictory in **Edge**'s editorial and the review's comments regarding the PlayStation's technological limitations. *GT* only features six cars because the team has pushed Sony's machine as far as it can currently go. As for your fourth point, you may wish to have another go at reading the review.

Lastly, after more than 100 hours' play, **Edge** witnessed only two occurrences of slowdown, and neither proved significant enough to affect gameplay. Incidentally, *Night Driver* was released in 1976.

Never has there been an issue of **Edge** which has favoured a single machine as much as **E**55, where the magazine seems to have rekindled its relationship with the PlayStation. Either Sony payed the printing costs or enough PlayStation owners wrote in complaining about Edge's continuous yet justified praising of recent N64 games, most notably Rare's classic *GoldenEye*.

From the cover onwards, each section of the magazine had references to the greatness of the PlayStation, combined with slight gibes towards the N64, from the Sony merchandise competition through to Edge's apprehension regarding *Zelda 64* and its doubt over Nintendo's software quality reputation in the game on section. All of this culminates in the grand finale: the two main reviews of *Gran Turismo* and *Yoshi's Story*, with the former being hyped up even more than *Mario 64*. (At least that will keep PlayStation owners happy with the magazine.) The latter is totally disregarded, with **Edge** even going as far as implying this is the downfall of Nintendo's Class A output.

The target audience for *Yoshi's Story* is not 20- to 30-year-old games players such as those on your review panel. It's actually humorous observing how **Edge** has attempted to create a serious review for a game obviously aimed at younger children. The rating of the game has taken into account only its impact on the older games player, not the younger one who is more likely to purchase the game. *Gran Turismo*, on the other hand, is aimed at an audience whose age range lies closer to that of the magazine's review panel.

Instead of favouring one system from one issue to another, **Edge** should concentrate on giving its readers an informative perspective of the games market without presenting the inconsistent bias previous issues have tended to show.

Andrew Giles,
Henley-on-Thames

The reason for the differing amounts of coverage from one issue to another is simply a reflection of the what is important at the time. **E**54's 'bias' was toward the N64 due to the various announcements made at Space World, while **E**55 was driven by an (unabashed) interest in the PlayStation created by the superb *Gran Turismo*. As for the Yoshi's Story testscreen, **Edge**'s view remains the same; that Nintendo games have always had a child-like quality to them, but in the past that has been underpinned with a intricate and rewarding structure. *Yoshi's Story* simply failed to live up to its progenitors high-standards.

Could you describe just what is involved in performing common roles within the games industry. Some titles that deny a clear understanding are 'games producer' and 'games designer'.

I'm curious of what would be expected of me if I were to apply for a job as - for instance - a games designer. Would I have to provide a complete specification of my design concept for the entire game from the bottom up, including complex level maps and character design? Alternatively, would a basic concept be enough to start on a co-operative effort to design the rest of the game with the rest of the development team? And what of the producer? Is this post reserved only for pen pushing managers with grey suits, no souls and a sta-pressed pair of plus fours and an 18 handicap? Or is it a challenging and interesting role that any responsible games enthusiast could turn their hand to.

I've got a head full of game ideas - most of which I have developed into reasonably concise and unambiguous overviews, but I have no idea how to present this information to a potential employer. Your magazine is the only publication easily available that provides an insight into the games industry, for which I am appreciative. Please take the time to consider my request as I'm sure I'm not the only person who feels they could play a positive role in the games industry, rather than just being a consumer for the rest of their lives.

Mark Campbell,
via email

Concepts for games should be structured very much as movie scripts, with as much detail as you can provide, from character to level design. If you are considering approaching a particular company, then it may be worth contacting it in order to find out exactly what is required. Producers are often fanatically passionate about their work, and would doubtless balk at the idea of anyone enthusiastically 'turning their hand' anywhere near their projects.

Being a lifelong Nintendo loyalist it is worrying to me to see Nintendo's 64-bit hardware lagging behind the PlayStation - in sales terms at least. More worrying is the apparent drought of decent third party software, something which has never plagued the 32-bit consoles. Why is it that the majority of third party developers are - with the exception of Rare, Konami and Acclaim - lacking that 'something' which has made the PlayStation a huge success despite SCEE's internal development teams not matching with the skill of NCL's?

18 months after the release of the Nintendo 64 only three developers have produced the kind of games which were being released so soon after the birth of the 32-bit systems. Shigeru Miyamoto can always be relied upon to create a killer app, but it is developers like Capcom and Namco which can truly lift the N64's disappointing sales figures with their arcade perfect beat 'em ups - which gamers go crazy for and which the N64 is blatantly lacking.

I believe Nintendo needs to dramatically improve its dream team if it wants to catch up with Sony, especially in Japan where although *Zelda* will appease the *Final Fantasy* lovers, the *Tekken* freaks will be left in the cold.

Ravi,
via email

Hindsight shows that the PlayStation and Saturn killer apps have been remarkably thin on the ground. **Edge** has given relatively equal amounts of 'nine' scores to all three consoles, although the lack a fighting game of *Tekken*'s standard is definitely hindering the N64's success. The paucity of N64 third-party development skill is comparable to the early days of the PlayStation, and **Edge** believes that 1998 will see a dramatic rise in the quality of N64 releases.

With regard to the testscreen of *Quake 2* in **E53**. There was zero mention of any multiplayer play, which was the strongest feature of the original. How could you publish a review that misses out on such a crucial and important part of a game? I understand from reading other magazines that some have put forward reviews of the game on the strength of one day's reviewing in Activision UK's office, in order to produce a timely review for publication, and hence didn't have the chance to test the game's internet capabilities. I am disappointed that **Edge** has also apparently followed this route instead of producing a balanced review.

Chern Ann,
via email

Edge would never degrade an important release such as Quake 2 with a review written after a single day's play. However, there simply wasn't the facility to review the multi-player aspects of the game at the time. That it scored nine without even needing to use such facets is surely an indication of the quality of the game. Overall it was agreed that the importance of reviewing Quake 2 in good time outweighed other factors.

Having been a keen **Edge** follower from the start, and thought I would offer some feedback and ask some questions...

The Numedia section has lost its way. I think the music reviews suck - they're just very out of place and the music is very specialist, to the point of being obscure. Do you have someone in the team who is really into music and pushes this area forward? The books are closer but that medium is hardly 'the future of interactive entertainment'. However, Netview, retroview and develop are great - please expand!

I think the testscreen section needs a different scoring mechanism. It is true that between 1 to 10 there is scope for a lot of different scores, but when you look at the scores that come in they are invariably between 6 to 9. Why not start using scores out of 100, maybe keeping to increments of 5? Similarly, why not use 'best of breed' in the reviews, meaning you point out similar games to the one being reviewed and the score that was given.

The cover CD is very good. The videos of the games make the reviews so much more relevant. Why not make it on every issue and increase the cover price - 50p extra would be acceptable to me.

Neil Aubin,
via email

Surely cutting edge electronic music is vitally relevant to the modern games industry, as the intermingling of the two draws ever closer? The purpose of numedia is to add depth to **Edge**'s coverage of the games scene, and is definitely more valuable in those terms than a further three pages of screen shots. As for review scores, can you imagine the outrage that would ensue if Irvine Welsh's latest novel was rated out of ten? A game is a far more emotional experience than, say, a dishwasher, and perhaps the time has come for scores to be removed altogether.

Looking at what Nintendo is up to at the moment (**E54**), it seems that they are spending more of their time and money developing stupid things for their 64DD, rather than getting on with current and new in-house games for the N64. The 64DD looks great to a certain extent but I think that Nintendo has gone way over the top. The only positive aspect about the device is being able to edit games, which will obviously come at a Nintendo's usual high price.

The N64 is flopping in its home territory due to the lack of new games. Here in the UK the N64 is growing in popularity but many think twice when it comes to £60 for games that are mostly average. The N64 is a 'kiddies' console with games such as *Diddy Kong Racing*, and the lack of serious games is putting people off.

The 64DD will probably be swamped with kiddie-style games featuring Mario and friends - not forgetting *Talent* and *Polygon Maker*. Add-ons don't work (ask Sega), so developers won't want to gamble. I just don't think the 64DD will do the business, although it will doubtless have some quality titles.

To round things off, Nintendo will soon be competing against Sega and Sony's new machines, something developers will already be bearing in mind.

Gary Osborne,
Middlesborough

Edge is tiring of having to refer correspondents to N64 titles that are clearly not 'kiddies' games, such as *Blast Corps*, *GoldenEye*, *Turok* and *Wave Race*. The debate is reminiscent of the 'my machine's better than yours' arguments that plagued the 16-bit era, and as such, the matter is now closed.

With regard to the 64DD, as stated in E54, **Edge** feels that the device is not being primarily designed as a means to enhance the N64's games. Looking at the *Maker* series of titles, it would appear that the 64DD is targeted at a similar market to the Pokemon games. Sadly, a release in the PAL markets seems increasingly unlikely.

I must take you to task over a line in the your article on *Virus 2000*. *Zarch* (aka *Virus*) was indeed presented on the Acorn Archimedes. However, you do the Acorn machine a terrible injustice - it was a 32-bit machine from the outset, not 16-bit as you stated. Although the Archimedes was indeed 'unfavoured', this was mainly due to bad marketing on the part of Acorn (here in NZ at least), and not a limitation on the part of the machine itself.

Douglas
via email

Saying the Archimedes was poorly marketed is akin stating that Sega's 32X was misjudged. However on this rare occasion, **Edge** stands corrected.

Cutting Edge

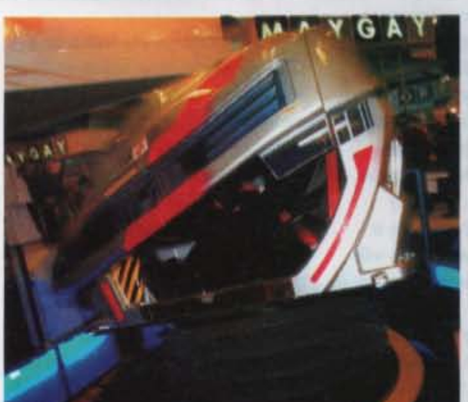
The latest news from the world of interactive entertainment

ATEI SETS THE TONE FOR '98









Konami's full hydraulic cabinet (last utilised for *Speed King*) made *GTi Club* a stomach-turning experience – particularly on its 'hard' setting







While not quite as enjoyable as the multiplayer version, the individual cabinet of Sega's *Harley Davidson & LA Riders* boasted a fantastic interface

January 1998 saw London's Earl's Court 1 play host to this year's Amusement Trade Exhibition International (ATEI). While many expected the industry's big guns to hold fire until the show's Japanese counterpart, AOU – scheduled for the following month – the surprise appearance of several key titles proved otherwise. Significant releases from Sega, Konami and Namco, plus welcome entries to the fray from 'lesser' companies, made attending the exhibition a worthwhile excursion for arcade operators – as well as **Edge**.

After several years of sustained growth, ATEI is one of the world's largest amusement industry shows, with January's boasting around 400 exhibitors – although this is partially due to the International Casino Exhibition's inclusion. In the interests of good reporting, **Edge** braved the long escalator ride to ICE, only to find colossal Sega and Konami horse betting games nestled among the well-dressed (and well-monied) attendees. Strangely, Namco's horse-racing game, *Final Furlong*, was nowhere to be seen...

Back among the mere mortals on the ground floor, several of 1998's triple-A titles were being play-tested to the limit by hordes of suited gentlemen. Of particular interest were Sega and Namco's stands, where *Get Bass*, *Sega Rally 2* and *LA Riders* from the former, and *Time Crisis 2*, *Ehrgeiz* and *Motocross Go!* from the latter drew crowds as only arcade games set on free play can. And these were just the triple-A titles; both had other interesting offerings. The second *Time Crisis* game retains the original's novel footpedal for reloading, embellishing an already successful recipe with spicy twoplayer action. Rather than share a display, sharp-shooters are treated to individual monitors, allowing the other player's character to appear on screen. Namco's other units, including *Rapid River* and a new mountain biking game named *Downhill Racers*, didn't live up to the promise of their bespoke interfaces. Both, however, exhausted the player to the same degree as their aforementioned stablemate, *Final Furlong* – which, ironically, proved a far more enjoyable experience than either.

Ehrgeiz, developed in Japan by the division of Squaresoft responsible for the *Tobal* series, far exceeded expectations with its multi-layered environments, solid animation and

SEGA AND NAMCO HAD *GET BASS*, *SEGA RALLY 2*, *LA RIDERS*, *EHRGEIZ* AND *TIME CRISIS 2*, DRAWING CROWDS AS ONLY ARCADE GAMES SET ON FREE PLAY CAN

intuitive gameplay. PlayStation owners will be in for a treat when this game is eventually converted to the console, but until such time **Edge** heartily recommends a visit to the local puffy jacket centre. Namco also had its own version of SNK's NeoPrint device on show, allowing those who feel the need for such things to have their picture taken and printed out onto a variety of stickers. Sega and its newly acquired subsidiary Data East had a more adventurous iteration of the concept, which creates a rubber stamp rather than a sticker. Parents everywhere are going to have a rather more tangible reason to dislike arcades once their kids get hold of these.

Sega's more mainstream creations showed a creditable variety, not least *Get Bass*, the Model 3 fishing game that drew ▶

TIME CRISIS II







***Time Crisis 2* features novel twin screen, two player gameplay, and was among the best at ATEI**





Both of the show's big driving titles, Konami's *Racing Jam* and *Sega Rally 2* failed to hold Edge's attention to the degree expected. Sega displayed its game on the original development test rig - much to delegates' delight

◀ admiration from all who played. With fluid animation (pun intended) and force feedback in the control 'rod', Sega's game ditches the turgid waiting-in-the-rain aspect of the sport and allows players to enjoy the thrill of actually catching a fish. Of equal note was *LA Riders*, at least in its multiplayer mode, which has participants grappling with chopper handlebars as they race to various random target points. The game's totally open environments are perfectly suited to the concept, with those who played availing themselves of just about every illegal shortcut imaginable across LA. Visuals are superb, with the improved Model 3 chipset providing the horsepower – a reported 1.66 times faster than before.

Sharing this speed-boosted board was *Sega Rally 2*, as featured in **E**56. Though the game itself was far from complete, the handling model was sublime – almost too realistic, although the overall velocities of the vehicles seemed low. **Edge** met up with producer Tetsuya Mizaguchi, who revealed over coffee that his team had decided to slow *Rally 2* down, as most arcade goers simply couldn't cope with the handling at speed. After several plays, **Edge** was inclined to agree, disregarding the voice of certain 'hardcore' elements. Sega's other driving titles made a more muted appearance on the stand of Deith Leisure, the Japanese company's UK distributor. *MotoRaid*, a Model 2 motorbike game best described as *Road Rash* crossed with *Wipeout*, and the Model 3-driven *Le Mans 24*, were simply not up to Sega's usual standards.

Konami's stand didn't fare much better than Deith's in the quest for top-line releases, as the long-awaited *Racing Jam* somehow failed to live up to expectations. Perhaps the tidal wave of hype had a numbing effect – the game left **Edge** a little cold, although the open plan 'Gymkhana' tracks gave players the chance to experiment with the handbrake control. Another contributing factor may have been the lacklustre peformance

SEGA RALLY 2'S PRODUCER REVEALED THAT HIS TEAM HAD DECIDED TO SLOW *RALLY 2* DOWN, AS MANY GAMERS COULDN'T COPE WITH THE HANDLING AT SPEED





Interfaces don't come much more novel than this. Sega's *Get Bass* proved intuitive to play, backed up with some of the best Model 3 visuals yet seen

of Konami's Cobra chipset, which the company insists is capable of delivering around five million polygons per second (and which has also been trumpeted as a Model 3 beater). *Racing Jam* didn't look as if it was punting that many polys about, so **Edge** can only assume that the title has been lazily upgraded from its previous host, the sub-Model 2 Hornet board. The other Cobra based title, *Fighting Bujitsu*, proved highly reminiscent of *Virtua Fighter 3*, but was none the worse for that. Indeed, *Bujitsu* was a more convincing demonstration of Cobra's abilities than *Racing Jam*. Konami's other offering had a fraction of the visual mastery of its sister cabinets, but many times the innovation. *beatmania*'s twin record deck





Ignoring the 'Alcatraz' special edition of *San Francisco Rush*, this is Atari Games' follow-up *California Speed*. Although it features licensed cars, and has the benefit of being a second-generation title, *Speed* was unimpressive

Cutting Edge Cuttings

No boarding

While NCL's promising *1080° Snowboarding* is due for imminent release in Japan, it's PAL release has slipped back to Christmas. Similarly, as predicted in **E**54, Boss Game Studio's *Twisted Edge Snowboarding* has had its US release pushed back by five months to 'make the best game possible' - thus avoiding *1080°* in May.

Intel shifts up a gear

With Pentium processors of 200Mhz + now commonplace, Intel has confirmed its next wave of processors. Initial shipments of PII 333Mhz chips are already underway, with speeds of 450 to 500Mhz available within 4-5 months. Coupled to the new graphic accelerators, PC's should be setting the visual standard for the foreseeable future.

Sat 2 to get Dee 2?

Originally created for 3DO's misplaced M2 console, Warp's adventure title *D2* is now thought to be winging its way onto Sega's Saturn follow-op. Warp's is likely to announce final plans for the game prior to Atlanta's E3 at the end of May. Saturn 2 (aka Katana), is now pencilled in for a glimpse at the Spring Tokyo Game Show in March.





Sega and Namco followed SNK's child-sized footsteps with their own versions of the NeoPrint

interface disguised a game that shares its structure with the Grandmaster Flash of the rhythm-action genre, *Pa Rappa the Rapper*. Sadly, it failed to put many delegates in a spin.

Skirting the heavyweight champions were a few notable and not-so-notable contenders. Jaleco's Model 2 racer *OverRev* was distinctly old-tech in all the worst ways – handling, concept and visuals – as was SNK's Hyper Neo Geo 64 off-roading title, *Road's Edge*. Galeco's *Radikal Bikers*, an offbeat pizza-delivery game, was far more palatable, with the player controlling a madcap moped through crowded streets. The game's neat handlebar interface, which could be slammed down to make the character perform jumps and wheelies, added to an already involving experience. Sadly, the firm's snowboarding game *Surf Planet* failed to equal *Radikal* in both enjoyment and control system, being restricted to a dismal left-right joystick. Equally lacking was *California Speed*, Atari's sequel to *San Francisco Rush* – which is also PC based, while the System 3-developed *Bloodlust* was nowhere to be seen.

The full impact of the PC has yet to be felt by the arcade scene, although its relative low cost is bound to win friends among profit-per-unit obsessed operators. Certainly, with the newly formed Acclaim Arcade division offering processors for just a few hundred pounds each, running 3Dfx powered titles such as *Wipeout XL* that can be loaded from CD (developed under Intel's Open Arcade Architecture project), the take-up should be swift. *Armageddon*, Acclaim's other title, ran on a bespoke RISC-based board and was one of ATEI's best kept secrets. The game's eclectic, trackball spinning action reminded **Edge** of classic Atari titles – and recommendations don't come much higher than that.

Overall then, this year's exhibition served to reassure Europe that perhaps the Japanese giants hold it in higher esteem than everyone thought. Games such as *Time Crisis 2*, *Sega Rally 2*, and even *Racing Jam* have only recently been released in their home territory, confirming that the coin-op market at least has reached a state of international equality. And whatever niggles **Edge** may have, the overall standard of arcade titles continues to rise. With *Virtual On 2* yet to come, 1998 could prove a vintage year for a coin-ops – perhaps the last to showcase the dominance of specialist PCBs before the upstart OAA finds its feet.





Galeco's *Radikal Bikers* rewards players with frantic action, as they guide a pizza delivery scooter around a range of obstacle-filled towns





Potential DJs will be delighted to learn that they can now practice their dark art on screen with Konami's oddball *beatmania* cabinet









Brave individuals may care to seek out the electrocution chair, as seen in London's Trocadero. Other novelties included a Pentium-powered goal kicking game, Konami's *Skier's High*, and Namco's mountain biking title, *Downhill Racers*

French renaissance

Following its double acquisition of Ocean Software and much of Philips Media, Infogrames has declared its interest in buying Virgin Interactive Entertainment. VIE has been on the market for some time, and is currently owned by Viacom. A combined Infogrames/ Virgin would have a sales potential of around $450 million.

Discount DD?

Rumours are rife within the development community that Nintendo is planning to release its 64DD add-on for $79 (around £50) in the US. Given that the device will be needed to aid the N64 in its battle against Saturn 2, plus PlayStation 1 *and* 2, the low price-point is credible. Less certain is whether a modem is included in the unit.

Battle of the planet

Yet more unfortunate bad news for the Saturn, with EA's confirmation that the company is to cease all development for the short-lived platform. Additionally, both UK and US retailers are discounting Sega's 32bit machine and its software, with several US titles available for around $5 (£3), and machines for $80 (£50).

Fun in the sun

This month sees Milia 98, the multimedia awards show held in sunny Cannes, on the French Riviera. Whereas previous Milias emphasised the multimedia aspect, this year's event sees a growing presence of videogames publishers, including SCEE. As a member of the judging panel, **Edge** will carry an in-depth report in its next issue.

continued

NEC & VIDEOLOGIC UNVEIL 2ND GENERATION POWERVR



The arcade version of Kalisto's *Ultimate Rally Pro*, named *K-Rally*, running on an Arcade PC with a Second Generation PowerVR board

2ND GEN POWERVR

Performance	
Drawing:	1.2 million forward-facing polygons/second (5x PCX2)
Fill rate:	120 million pixels/second (2x PCX2) PowerVR2
3D rendering	
Display list based with dynamic screen tiling	
On chip z-buffer	
Hardware translucency sorting	
Texture mapping and filtering	
Unified frame and texture memory	
Hardware bilinear, trilinear and anisotropic filtering	
Full-scene anti-aliasing using image super sampling	
Specular highlights, bump mapping and special effect volumes	
ARGB Shading	
Vector Texture Compression	
AGP 2x execute mode	
Memory	
4-8MB	
Display	
Up to 1600 x 1200 in 24-bit true colour	

The follow-up to NEC and Videologic's PCX2 chipset has been unveiled. Second Generation PowerVR is at least twice as powerful as the companies' current technology.

The new processor can deliver around double the number of forward-facing polygons per second achieved by the PCX2. Its fill-rate is nearly five times better, while clock speed is up by 50 per cent. On paper, this compares well to 3Dfx's Voodoo 2 chip, which is expected to deliver over a million polygons per second in game, with a fill rate of 90 million z-buffered, textured and treated pixels per second. Design differences prevent direct comparison.

Five chips based on the Second Generation PowerVR processor are expected over the next 18 months. The first will be a combined 2D/3D chip that will be deployed inside PCs and third-part add-in boards from June. These are likely to be teamed with 4MB of DRAM, though Videologic expects 8MB to be the more widely adopted configuration long-term. The technology will later be included in an integrated arcade solution, a games console and two further PC chips. One of these will be a 3D-only processor. **Edge** suspects the other will target the ArcadePC platform.

Second Generation PowerVR follows the template set by the original PowerVR processors. It is display-list based, so each pixel is processed just once, while deferred texturing means texturing and shading is applied only to visible textures. Videologic has long claimed that this makes performance independent of scene complexity.

'The chips will surpass the competition in quality and performance,' says a confident Trevor Wing, Videologic's vice-president of Marketing. Firstly, he says, Videologic has added a floating point geometry and texture setup engine. Using a 32-bit floating point format means there's no need to convert the results of calculations done by the CPU before passing them to the graphics chipset. 'On the first generation PowerVR we had to do a format conversion every time, which is why we didn't run well on low-end machines,' says Wing.

32-bit floating point accuracy also holds true for the on-chip z-buffer. According to Wing, this helps smooth the progression of distant on-screen objects as they move towards the front of the screen. With a 32-bit z-buffer, there are millions of positions into which approaching objects can be slotted as opposed to just 56,000 with a 16-bit z-buffer. This stops jerkiness as they go from one best-fit slot to another. Like the original chip, Second Generation PowerVR splits the screen into tiles and deals with each in turn (an approach that's been adopted by Microsoft in DirectX 6). With hardware tile acceleration though, the graphics processor decides which tile to place a polygon into, again minimising the load on the CPU. Another new technique which reduces the CPU load is hardware translucency sorting. 'When you see a scene with lots of translucency, the frame-rate drops,' says Wing. 'With PowerVR, it doesn't.'

Finally, the processor does 10:1 texture compression. Even with the AGP, texture compression is important, since main memory is still precious and thought AGP is fast, transferring textures still takes time. Second Generation PowerVR uses 2X AGP with sideband addressing – the Direct Execute mode that enables the graphics chip to request textures from main memory even as it receives them. The PCI bus is also supported.

The original PowerVR processor struggled against 3Dfx on texture-mapping and special effects. Things look better this time. Videologic claims Second Generation PowerVR's tri-linear filtering is as quick as its bi-linear. Anisotropic filtering is also included. This is best employed where traditional perspective correction would warp textures – such as billboards carrying text on racing game sidetracks. Anisotropic filtering does hit performance, so developers should use it only sparingly.

Another key development is Second Generation PowerVR's unified frame buffer and texture memory. 'You can do video texturing, texture layering, all sorts of nice things,' says Wing.

TEXTURES CAN BE RENDERED ONTO AN AREA THEN SWAPPED AROUND IN MEMORY AND EMPLOYED AS A FRESH TEXTURE

Videologic further claims Second Generation PowerVR is the first 3D consumer processor to offer full-scene anti-aliasing through supersampling. The game engine can render a scene at, say, 1024 x 768, then deliver it anti-aliased to the screen at 640 x 480. The result is very crisp image. Other tweaks include specular highlighting and perspective correct ARGB Gourard shading. Some complained that



***K-Rally*'s cars are somewhat light**

continued

Nintendo stalls *Pilotwings 2*
Nintendo has halted the development of its N64 flight arcade/sim sequel, leaving developer Paradigm Entertainment without legal rights to continue the project. There is however, no dispute between the two companies and the project may continue at a future date, once Nintendo has sufficient time to work on the game adequately.

PC titles get Shiny 64bit treatment
In a recent interview, Shiny Entertainment's Dave Perry announced a series of forthcoming titles that may be converted to Nintendo's console. Top of the list is *Stunt RC Copter*, followed by *Messiah* and *MDK 2*. A 64bit version of *Wild 9* may also appear and developer Team 17 is said to also be looking at a version of *Worms 2*.

Game Boy sees the light
Nintendo has unveiled the next step in the continuing Game Boy saga. Named Game Boy Light, the slightly larger portable gaming device features an illuminating glow similar to the Indiglo technology seen in Timex watches. Currently planned as a Japan-only release, its two AA batteries promise 12 hours' play with the light on or 20 with it off.

SCEI hits back at FTC
The Japanese anti-monopoly watchdog has accused Sony of breaking trading rules. The Fair Trade Commission has ordered Sony to stop forcing retailers to sell PlayStation games at a fixed price and exercising a policy of not supplying shops unwilling to comply. As yet SCEI has ignored the ruling, maintaining its practices are legal.

PowerVR colours were flat. Wing says ARGB shading will redress this: "Our shading was based on intensity, not RGB colours.' Software support is still vital – 3Dfx's Voodoo chipset could perform ARGB Gourard shading, but some games still used intensity shading.

Videologic's main rivals, it says, are 3Dfx's Voodoo 2, the Intel740 and, strangely, nVidia's Riva 128 (the next Riva is more likely to prove a threat than this capable but hardly second-generation chipset). Wing believes Videologic is fighting 3Dfx for the public mindset, and the latter two for volume. It's true that 3Dfx is trading on its name to create an air of exclusivity for its Voodoo 2 technology, but although Voodoo 2 is sure to be powerful, it's almost certainly be the most costly option. So it's unlikely to make it into standard PCs.By contrast, Intel and nVidia are volume competitors: 'We're going to fight for the socket on the motherboard against these guys.'

Much hangs on Microsoft's performance with DirectX 6. Videologic is concentrating on making sure its chip looks good in comparison with others under Direct 3D. But 3Dfx is defiantly pushing its GLIDE API as a separate, distinct platform. As Wing warns, 'the API wars aren't over yet.'





Although only a prototype, supposedly running at half-speed, the ArcadePC showed potential

INTEL740 REVEALED AT LAST

Intel has finally lifted the veil of secrecy surrounding the Intel740 graphics processor. The chip, formally known by the codename Auburn, will be a 2D/3D solution designed for the mainstream market. It will become available in graphics cards and new PCs from April.

The Intel740 is an AGP card and will only work with Pentium II processors. Intel has yet to quote the raw performance figures which other manufacturers use to promote their technologies, but a clue comes from Terra, a specially written demo. Terra features several animated dolphins, and runs at about 40 frames per second. Intel estimates that between 5,000 and 20,000 polygons are on the screen at once, which would indicate the processor can handle between 200 to 800 thousand polygons per second.

'It's going to be better than the processors on the market today and as good as those coming onto the market in 1998,' claims Graham Palmer, Intel's Product Marketing Manager for Chipsets and Graphics. He says the Intel740 derives much of its power from its so-called HyperPipelined design. This enables the queueing and parallel processing of several graphics commands at once.

As discussed elsewhere, Intel is targeting the mainstream mass-market. As such, the Intel740 will come in many different configurations, such as 2, 4 and 8MB local video RAM versions, depending on the manufacturer's pricepoints. Intel certainly has the ability to set a lower price for the Intel740 in the future, since it's using recently vacated Pentium fabrication plants to make the chips. If nothing else, the company must be hoping that the Intel740 will make the sort of impression which the MMX instruction set a year ago.





These shots from the Intel740 accelerated version of Rage's *Incoming* suggest the processor will be a force to be reckoned with



Creative Labs believes that the Voodoo 2 is the most powerful next-gen graphics processor

2 VOODOO 2

Two leading hardware manufacturers, Diamond Multimedia and Creative Labs, have announced 3D-only accelerators based on 3Dfx's Voodoo 2.

Creative Labs' 3D Blaster Voodoo 2 will go on sale this Spring for around £200. It will be shipped with 6MB of EDO DRAM, where 2MB will be allocated to each texture processing unit, and 2MB to the frame buffer. Diamond Multimedia's Monster 3D II will come with 8MB of EDO DRAM, with 4MB allocated to the frame buffer. There's no confirmed UK price or release data yet.

Apart from the 2MB of memory, the biggest difference between the cards is in the name. Having finally wooed Creative Labs, 3Dfx gave the company the right to include Voodoo in its product names. How important this proves in the marketplace will partly depend on 3Dfx's own campaigns.

Edge was treated to a demonstration of the 3D Blaster Voodoo 2. Although only unoptimised games were shown, results were impressive. *Forsaken* and *Quake 2* averaged around 60fps and *Ultimate Race Pro* seemed equally speedy. All games suffered from occasional jerkiness when the screens were crowded. Whether this was a result of incomplete drivers will soon be known.

But one thing is certainly becoming clearer: a high number of frames per second rate, in itself, is not enough to guarantee completely glitch-free gaming.

3Dfx >x2

3Dfx, the US accelerator card manufacturer has announced its first profitable quarter with an impressive 126 per cent increase over its previous quaterly figures. 3Dfx's total evenue rose to $22,296,000 over $10,018,000 for the third quarter of fiscal 1997 and a relatively small $4,503,000 for the fourth quarter of fiscal 1996.

One million chips can't be wrong

Worldwide sales of nVidia's Riva 128 chip have topped a million. The chip is reckoned by many to be the best Direct3D accelerator on the market. In the four months it's been on sale, the Riva 128 has been included in a wide range of add-in cards and PCs, including machines by Dell and Gateway 2000.

Nintendo to play the smart ALECK?

There could one day be little difference between an amusement arcade and a gamer's living room. Already thanks to the ArcadePC initiative, PCs are encroaching on coin-op territory. Now Nintendo is rumoured to be courting developers to work on its N64-based ALECK 64 arcade hardware. Nintendo probably envies Sony's System 11 and Sega's Titan schemes, which encourage the conversion of arcade games to home platforms.

Party like it's £19.99

Codemasters' *Micro Machines V3* is one of the latest titles to join the PlayStation's Platinum range. Other releases include Psygnosis' *Destruction Derby 2* and Fox's *Die Hard Trilogy*.

(out there)

REPORTAGE FROM THE PERIPHERY OF THE VIDEOGAMES INDUSTRY

Ad Infinitum







Virgin has spent the last two years cultivating an unenviable reputation for controversial marketing tactics. Campaigns like the 'wouldn't you like to give them all a bloody good kicking' series for *Command and Conquer* and the *Resident Evil* blood bath attracted derision not only from within the industry, but from the tabloids – whose impeccable sense of decency is of course unquestionable.

But recently the company has decided to take a different slant, if not wholeheartedly embrace a less dumbed-down approach. The adverts for *Command and Conquer: Red Alert* were an immaculately conceived parody of British Army recruitment posters. Beautifully-shot pictures of sergeant majors yelling at new recruits and miserable looking soldiers wading through muddy water were juxtaposed with text asking if the readers would rather join the army, enduring years of mindless conformity and random cruelty from superior officers OR get all the excitement of armed conflict from the comfort of their own homes with *Red Alert*. It's certainly a more witty and subtle angle – as **Louie Beatty**, Vice-President of European Marketing, is quick to point out: 'If you look at our most recent work the approach has been to provide creative, intelligent, relevant advertising for our products. We like to experiment with new ideas.'

Despite the change of heart, however, Virgin is keen to defend its past endeavours. 'To shock the industry through aggressive, controversial advertising – this appears to be the perception of our work,' complains Beatty, 'but in reality our approach is very different. What we like to do is to make our message as interesting and relevant to the target market as possible. In our '97 campaigns, there was nothing shocking or controversial about PS *Red Alert*, *Blade Runner*, *Jedi Knight* or *Curse of Monkey Island*. We do not do controversy for controversy's sake. But to the same extent, we do not shy away from a good campaign because the message is too close to the bone – so to speak.'

As for *Resident Evil 2*, **Edge** senses a return to VIE's macabre form of old. The blood-filled bath used to promote the first game was a startlingly effective image, putting the onus on Virgin's ad people to top it. As Beatty puts it, '*Resident Evil 2* is going to be our biggest PlayStation launch in Europe to date. 20% of the installed base owns a copy of the original title. We have to make this one memorable, don't we?' With a £10m ad budget available for 1998, there's a good chance Beatty will succeed.







Apple Tease

To celebrate the fact that it is now making a profit, Apple has launched its first corporate advertising campaign for two years. The controversial 'Think Different' series of TV, billboard and airport commercials feature a selection of people who have, in various ways, shaped the 20th century – or, as Apple rather more dramatically puts it, 'the minority who have continually challenged authority, outperformed the competition, confounded the critics and entertained audiences'.

By aligning itself with the likes of Gandhi, Picasso and Einstein, Apple aims to show that its computers are the tools of genius. Unfortunately, by inserting 'outperforming the competition' as a proviso, Apple unwittingly ensured it could not use any of its own luminaries in the line-up.







Eidos' eye-candy

Filling the shoes (and vest) of Rhona Mitra, the previous 'real' Lara Croft, must have seemed a daunting task for Eidos' marketing department. While not a perfect match for her pixelated doppleganger, Ms Mitra more than made up for the deficit in attitude, and was amply qualified in other areas. However, once Mitra's fame began to rival *Tomb Raider*'s own, she and Eidos decided to 'part company on amicable terms'.



Subsequently, **Edge** was startled to witness the remarkable similarity between Lara and her new human counterpart Vanessa Demouy, particularly in the main image below. Previously known in her native France for a career in modelling (and a thankfully brief attempt at pop-stardom, if clips on the internet at anything to go by), Demouy has yet to be confirmed as the only Lara in circulation. Apparently Eidos is considering signing several separate Croft-a-likes, presumably to prevent a repeat performance of Mitra's individual stardom.

With revealing pictures of Demouy already available on the net (see inset for a mild taster), a prevailing wind of tragic sadness is already blowing chill around **Edge**'s neck.



EDGE SINGLES OUT THE WINNERS AND LOSERS IN THE INTERMINABLE BATTLE FOR VIDEOGAME CRED

(game on)

The **pie-toting individual** who managed to get close enough to Bill Gates to deliver a custard cream tart straight in the multi-billionare's face, thus realising the dream of many.

THE's decision to release the Game Boy camera, printer and the Pokemon game in the UK this year. Expect **Edge** to make a late appearance every issue from that day on.

Resident Evil 2, which saw Japanese first day sales reach the staggering 1.8 million mark, and on an effortless course to breaking the record of two million units in three days previously set by *FFVII*.

N64 owners for continuing to show good taste, with *GoldenEye* still selling out all over the UK. They'll be reading **Edge** next...

Empire, yet again, for continuing to distribute ludicrous game scores. One out of five for *Mischief Makers* anyone? If blagging free games, at least take the time to review them properly. Alternatively, freelance them to **Edge**.

PC Zone, which managed to get itself pulled off the shelves of supermarkets nationwide with its tasteless series of images depicting children chainsawing limbs off an ape and blowing away a tucan's head, among other similar charming activities.

The **US mag** which leaked the early copy of *Resident Evil 2* it had received for the purposes of a player's guide to Hong Kong, resulting in pirated copies swarming the island's software shops.

The **US version of *Gran Turismo*** which will featured tweaked handling so that vehicles will 'get more air' over rises. Oh God...

(game over)

NUMEDIA

A MEETING POINT FOR MEDIA CAPITALISING ON THE DIGITAL ENTERTAINMENT REVOLUTION

gadgets

Cathode ray tube TVs have always suffered from one major flaw: the picture is projected onto a curved surface, which can severely alter the image's original geometry. Over the years TV manufacturers have strived to make tubes flatter, admittedly with some degree of success.

However, Sony has now gone one better and introduced the **KV-32FD1 FD Trinitron Wide DPL TV**. In other words, a virtual Dolby Pro-Logic, 32-inch widescreen television set boasting a totally flat screen. Plus, in addition to all the usual functions, a VGA-SUB bus input on the front panel allows a PC to use the television as a monitor. The technology employed here may be beyond the understanding of many consumers, but the results can be enjoyed by anyone. The picture quality is magnificent, with superb colour balance and near-perfect geometry previously only possible with top of the range projection systems.

£2,500
Sony tel: 0990 111999
Out now





When first announced, plasmatron screens were hailed as the future of television sets. However, the first models were far from convincing, suffering from poor contrast levels in addition to colour reproduction problems.

But progress is swift and the next wave of plasma display screens is just around the corner. First out of Japan, is Pioneer's new **PDP-V401E plasma display screen**. The 40-inch multi-purpose set is a mere 9cm deep and can accept several sources such as a TV tuner, video, PC, Laserdisc and DVD player. More importantly, the screen boasts a brightness level of 400cd per square metre, much higher than any of its predecessors. The future may be bright after all...

£TBA
Pioneer tel: 01753 789789
April '98

music



Moon Safari
Air
Virgin

As debut albums go, 'Moon Safari' from Parisien hipsters Air is already being hailed as one the best albums that 1998 can expect to yield. And it's not hard to understand why.

Spanning a rather precarious divide between such diverse styles as ambient, folk, 80s-style synth pop and easy listening, Air takes this breezy, sleazy cocktail and imbues it with some of the most gloriously radiant melodies and dream-like soundscapes you're ever likely to hear.

Imagine Midnight Cowboy's Jon Voigt swanning around Paris in a beaten-up VW Camper with Serge Gainsbourg and Burt Bacharach on the decks in the back. Get your head round this and you're close to appreciating what is possibly the coolest, most beautiful album in the world.



Big Calm
Morcheeba
Indochina

Many critics dumped Morcheeba's previous album – their first – into the post-trip hop litter bin along with the likes of Archive and Moloko, without giving the band's sparse, bluesy beats the attention they deserved. However, this follow-up, an infinitely more dense and melodic work, may finally earn them wide scale recognition. Not that Morcheeba has had a complete change of heart – tracks like 'Bullet proof' still feature that sinister echoey dub, but these are now accompanied by the likes of 'The Sea' with its lush strings and funky guitar, and 'Part of the Process' which even toys with country music conventions. Although some may miss the murky production of old, most will find Morcheeba's wider experimentation a fascinating and calming experience.

Panasonic's **DVD Home Theatre System** takes the company's superb £1,700 TX-W32D2DP widescreen television and £600 A100 DVD player, and joins them with a complete sound system from Technics. This includes a £300 SH-AC300 digital surround processor which is in turn hooked up to the £1,000 THX receiver and £1,700 THX certified speaker system. High end home cinema users may scoff, but the resulting set-up (cheap in THX terms) is impressively competent, offering an effortlessly wide sound stage. Definitely worth auditioning.

£5,300
Panasonic tel: 0500 404041
Out now



Dolby Pro-Logic is well past its sell-by date. A narrow bandwidth and mono signal to the rear channels are no longer good enough for cinematic emulation.

Film soundtracks these days are digitally recorded, with full bandwidth signals and surround sound created through five sound channels, and (usually) a sub-woofer additional channel. So-called 5.1 digital surround sound comes in two flavours.

There's Digital Theatre Sound and there's Dolby Digital, the format used for sound recreation by this TV, the first ever **Widescreen Dolby Digital** set. It sounds superb, which goes without saying, and at 32-inches, the picture quality is very high. A great TV, then, and one that's all but future-proof. For the next few years or so, at least.

£1,200 (28"), £1,600 (32")
Toshiba tel: 01276 62222
Out now

Sony is currently advertising its **SA-VA7 multi-purpose surround sound system** in US mags as the perfect audio accompaniment to the PlayStation. This simulated Dolby Pro-Logic set-up uses two speakers to create 'virtual surround', and boasts an output of 80 watts. In Britain, the more powerful SA-VA10 (four speakers, 100w output) makes a good alternative, but either of the systems represent a good, basic intro to the wonders of Dolby surround sound.

prices from £350
Sony tel: 0990 111999
Out now









Saturnz Return
Goldie
ffrr/London

Arguably, Goldie owes his fame as much to his Metalhedz club and record label (and his flamboyant personality) as to his music. 'Timeless' wasn't difficult listening, but it still remained closer to Jungle's roots than the drum'n'bass-lite that swamped pop culture during 1997. The two CDs which make up 'Saturnz Return' largely rework the same territory, though here Goldie's trademark circular skipping beats and penchant for vocals are put to darker use. At 45 minutes long, 'Mother' is both extraordinary and disposable. The other tracks (which include contributions from Noel Gallagher and Bowie) plunder genres with ease, but while Goldie dilutes his efforts so, it's hard to tell if he's expanding or muddying the musical form he helped make famous.



Desert Planes
Various Artists
Sublime

Now here's a concept: on this bizarre compilation, eleven of Detroit's most revered techno Gods and Goddesses try their hand at hip-hop. Could this be the future of techno, or was someone having a laugh? Well, the whole exercise was conceived by the mad collective genius which is Japan's Sublime Records, and with a cast including Kelli Hand, Kenny Larkin, Robert Hood, Eddie 'Flashin' Fowlkes, Claude Young, Stacey Pullen and the long-lost Thomas Barnett, you can't go wrong. Never before has hip-hop been imbued with such subtlety, tunefulness, attitude and aching beauty. Sean Deason and Dan Bell steal the show, but this is astonishing, unexpected mellow listening. Surprisingly, it's even got some decent rapping. Sublime indeed.

cd-rom

Illusions

Everyone knows at least one optical illusion; the vase that becomes two faces, the lines that appear to bend if placed in front of another shape. Fewer people, however, understand what these illusions tell about complexities of visual perception and about the inner workings of the eye. This is where *Illusions* – the latest science title from Macmillan Interactive – comes in.

This collection of over 50 optical illusions and visual puzzles, comes complete with detailed yet readable explanations, so users can at last understand why car wheels appear to be going backwards when the vehicle is speeding forwards, and why we have difficulties perceiving depth with only one eye open. To accompany this fascinating exposé is good peripheral detail, including an explorable map of the eye and interviews with those working at the limits of optical perception (racing driver Nick Longhi, for example, discusses how the eye perceives speed). While the presentation is rather basic and scruffy, the ideas discussed are certainly stimulating enough to warrant attention.



Developed by Byron Preiss
Published by Macmillan Interactive
£20, PC CD-ROM & Apple Mac

X-Files Unrestricted Access

Edge may be wrong, but it seems the frenzy which surrounded 'X-Files' last year is starting to die down. Gillian Anderson has stopped appearing in lifestyle mags with no clothes on and David Duchovny has got married, ending months of media speculation about his spectacularly debauched love-life.

No doubt the film will stir things up again later this year, but till then, X-Philes have *Unrestricted Access* to play around with. This is no game, however. This is a sort of cross between a website (*X-Files UA* uses the WWW extensively) and a puzzle/adventure title. The user has to research case studies and files to discover new info. Beneath the deliberately esoteric front-end, this is just a glorified multimedia CD-ROM. Users can look at film clips, images, synopses of key episodes, character profiles, etc, plus, there will apparently be regular updates to the product's database via the WWW. Obsessive fans can even customise their PCs with a range of desktop modifications.

Ultimately though, *X- Files UA* will be an interesting purchase for fans, but a tiresome bore for anyone else.



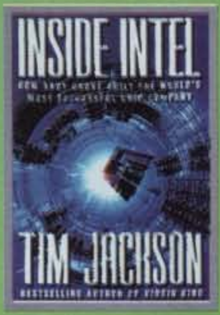
Developed by Byron Preiss
Published by Fox Interactive
£20 PC CD-ROM

books

Inside Intel

While a new book chronicling the internal activities of Microsoft is published every week without fail, Intel – that other big brother of the PC world – seems to have got away largely untouched by sensationalist exposes. This is perhaps what makes Tim Jackson's gripping and insightful book especially fascinating. As ever, there are plenty of skeletons to discover in the corporate closet; the fiasco over the Pentium chip and the damage it did to the company is covered in detail, as are the business practices of Chief Executive, Andy Grove.

Although the history of Intel since inception in 1968 is covered fully, it's perhaps Grove who provides the main framework for Jackson's study. Interestingly while Bill Gates chose to give his recent book a wishy-washy monicker like 'The Road Ahead', Intel's head honcho published his own philosophy entitled, 'Only the Paranoid Survive'. **Edge** feels this gives a chilling glimpse into the ethics of a company that touches almost everybody's life.



Inside Intel
Tim Jackson
£20
ISBN 0-00-255777-0

Underground

As tempting as it is to believe in social stereotypes, Australia is not entirely made up of beer-swilling neanderthals and empty-headed surfers. Just like the rest of the developed world, the country has its fare share of sophisticated computer users and abusers, and predictably it's the latter that provide the subject matter for 'Underground'. Yes, following hot on the heels of best-selling "dark side of technology" tomes such as Bruce Sterling's 'Hacker Crackdown' and Tsutomu Shimomura's 'Takedown', this is another attempt to get into the mindset of the hacker; studying their shadowy communities and revelling in their chaos-inducing activities.

Here, however, Dreyfus tries something slightly different – not only by taking the antipodean slant, but by analysing the people behind computer crime, not just what they get up to. Plus, the whole thing is written more as a surreal thriller than a straight forward text book – an interesting way of dealing with an increasingly tiresome subject.



Underground
Suelette Dreyfus
£TBA
ISBN 1-86330-595-5

music



Thrilled by Velocity
Girl Eats Boy
Hydrogen Dukebox

The latest project from The Drum Club and Slab man Lol Hammond adds yet another string to the latter's bow, with funky beats and heavy use of vocals making for a record aimed at the feet rather than the head. It doesn't qualify as house music, but then it's a world away from the harsh techno of Slab, as exemplified by the husky female vocals, dubby guitar, and big, friendly breaks of 'Kill Pussy Kill', the equally crazily titled 'Moist Girl Hates The Government', or the beautiful (and Drum Club-esque) 'Surfing in Rekjavik'. Listen carefully and it's obvious that Lol really is working hard at this sound, but a display of technical proficiency isn't really what 'Girl Eats Boy' is about. The fact that it makes you want to dance is more than enough.



Blow Your Mind
Johann
Blue Room Released

Despite the multitude of compilations appearing every month in the still burgeoning psychedelic/Goa trance scene, few artists get around to releasing albums of their own. Or, as it seems in this case, lack the musical ability to be able to pull it off with any finesse.

Johann is the percussionist from tribal trance funksters Juno Reactor and while his 1996 single 'New Kicks' boded well for a debut album, mysteriously it isn't present on 'Blow Your Mind'. The rest of ensemble lacks musical direction and variety, pursuing the overblown, manically unfocused formula that seems to dog a lot of trance. 'Stranded', for example, would probably be better sonic accompaniment for a side-scrolling shoot 'em up than an outdoor party.

netview

EDGE'S EXAMINATION OF THE INTERNET AND ONLINE GAMING SCENE

Faster than a speeding new media revolution

A group of leading PC companies are pushing a new method of data transmission that could turbocharge Internet access. Universal Asymmetric Digital Subscriber Line (Universal ASDL) claims to offer the tantalising prospect of data transfer that's some 25 times faster than today's 56Kbps modems.

A standard telephone line uses a 4KHz frequency band to carry information. Consider that standard ASDL packs 255 4KHz bands onto the same line, and its appeal is obvious. ASDL is somewhat dependant on the quality of local phone networks, but at its best it could pump the Net into the home at 8Mbps – the equivalent of 255 modems attached to a PC in parallel.

ASDL technology isn't new, but the lack of a common standard has slowed down its adoption. Universal ASDL, as proposed by Intel, Microsoft, Compaq and others aims to fix this. Universal ASDL is a cut-down version of ASDL that can manage a top speed of around 1.5Mbps.

That's a big speed reduction, but Universal ASDL offers the huge benefit of requiring no expensive changes to local telephone networks and no extra hardware in the home except for an ASDL modem. Were the Universal ASDL standard to be adopted, these could quickly become as ubiquitous as analogue modems are today.

With the Internet becoming increasingly bogged down by its own soaring success, more powerful modems are sorely needed. But Britain is unlikely to get the new technology as quickly as the States, where the Universal ASDL companies are concentrating their efforts to reduce congestion on the Super Highway.



One day ASDL modems will be as common as the US Robotics Sportster Flash and Alpen

Those wishing to know more about Universal ASDL could start by visiting the Working Group site at **http://www.uawg.org** (**Edge** wouldn't recommend the experience to anyone but an insomniac, however)

Sony site sorted for your pleasure

No news on Playstation 2, but Sony has at least overhauled its European Web presence. Built to thrill, the new PlayStation site is a riot of buttons, animations and visual gags. It's currently a bit slow to use, but Sony claims that things will significantly improve once the deluge of new users has subsided, not least because all the animation is handled with Macromedia's speedy Shockwave Flash plug-in.

The site incorporates all the news, previews and corporate brouhaha you'd expect – what is novel, however, is the way it's delivered. Registered users can choose to identify themselves as one of several stereotypes, which is to say having specific personality traits such as being an adrenaline sports junkie or a sci-fi fan (see below), and then receive a site personalised for their pleasure. It's even possible to create a unique avatar to don when visiting the site's chat rooms. **Edge** gives notice that Parappa's head, Crash Bandicoot's legs and a pair of slippers should be considered reserved.

Visit the shiny new Sony PlayStation website at **http://www.playstation-europe.com**











The PlayStation website is meant for people looking to buy the console, as well as the legions who already have. Visiting Sony's new site is also a lesson in pop psychology. Find out why

Plug and pay into Wireplay



Taking up a subscription with Wireplay could be the best excuse to play that next level

The rewiring of BT's Wireplay service continues. A new credit card subscription service gives hardcore users unlimited access for a reduced cost per minute.

Under the current billing system, players are charged £1.50 per hour off-peak and £3.60 per hour at other times. The new option sees charges of £9.95 per month or £99.95 per year, all neatly paid for via credit card – albeit Mastercard or Visa only. Time online is further charged at BT's lo-call rate, which can prove to be as cheap as one pence per minute.

To save users from reaching for their calculators, Wireplay has stated that in its estimation, anyone who spends more than 11 hours each month logged on to the service will be better off switching to its subscription option. So it pays to be online, so to speak.

For more details on Wireplay's gaming service visit **http://www.wireplay.com**. Wireplay boasts less latency than the Internet, and supports many top multiplayer games including *Total Annihilation*, *Red Alert* and *Quake*

(BIG IN JAPAN)

A symphonic swan song for the Saturn

Japanese otaku who've tired of their Saturns might soon investigate a new use for their hardware. Denshai Media's *Techno Motor* is a piece of intriguing music creation software for Sega's console that enables owners to put together sonic masterpieces through nothing more than skillful manipulation of the joypad. It costs just ¥4,800 (£23) and requires no further musical instruments, recording equipment or, **Edge** fears, talent.

Make no mistake, *Techno-Motor* is no *Parappa the Rapper*. As befits the thinking man's games console, *Techno Motor* is much more than just a toy – it's a full-blown sequencer. Designed by Fujita Naruhiko, a self-confessed sequencer addict, and Taneda Yosai, a multi-talented pianist, trumpeter and accordionist, the software aims to bring the joy of making music to everyone. (Those who remember their childhood recorder classes with a healthy cringe may very well question the wisdom of this sentiment.)



To promote *Techno Motor*, Denshai Media hired two kawai (cute) promotions girls. The girls travel the length of Japan under the name of the Technoski – literally translated: 'I like techno'

Promising to satisfy the most musically demanding and least literate of players, *Techno Motor* can handle as many as 99 sounds distributed across its four tracks; composers get exactly 11,714 prerecorded sounds to choose from. A huge library of prerecorded tunes and melodies that are included should further help the uninspired find their feet. What's more, when budding musicians tire of playing alone, they can call around a friend for some dual-joypad *Techno Motor* jamming.



The sequencer's library encompasses a wide range of musical genres including ska, techno, dance, soul, classic and an intriguing style called 'monkey', which doubtless moves the crowds in the best Tokyo nightspots in a way which **Edge** shudders to imagine.

As the composer switches between these styles, the screen itself changes, shifting from futuristic settings to psychedelia as appropriate. Finished

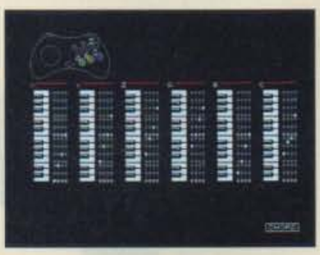






Simple copy and paste functions enable tracks to be quickly and easily put together in realtime (far right). The Technoski (virtually incarnated far left) are touring Japan, evangelising the *Techno Motor*'s ease of use, prior to the launch of the software at the next Tokyo Game Show in March







Techno Motor's designer, Taneda Yosai (left), had his sister design these two giant – and fully operational – joypads

pieces can be saved onto the Saturn's memory card.

Apparently, the developers chose the Saturn because its joypads lent themselves readily to musical reinvention. The pad's buttons are each assigned a note, with the shoulder buttons altering the pitch. Pressing left and right on the D-Pad selects sharps and flats, while up and down shifts octaves accordingly.

Early reports suggest that getting the hang of the joypad isn't a trivial task. But with the middle-classes shelling out for piano and guitar lessons, how difficult can it be to persuade them to send their children for lessons in using the Saturn's controller? At least getting children to do their music homework shouldn't be a problem.

Did D2 break the Saturn?

Like a tone-deaf busker, no sooner does Warp's *D2* project settle down that it finds itself moved along. Originally, the sequel to the catchily monikered adventure *D* was destined for Panasonic's M2 platform. When that machine went belly up, Warp began running ads in Japanese mags claiming '*D2* runs under XXXXX'. Most insiders assumed the blanked out hardware was the Saturn – until Warp's Kenji Eno hinted that *D2* was destined for Katana (**Edge** understands that the fully polygonal 3D world of *D2* proved too much for the Saturn). But equally, **Edge** would no longer be surprised to find D2 slated for, ooh, the Nintendo 128.



Edge intends to discover the truth behind *D2* at the Tokyo Game Show. The game is one of the most keenly awaited in Japan

Love me, love my Super Famicom

Everyone knows how Nintendo likes to keep its past alive. Yet its plan to relaunch the veteran Super Famicom has raised even the most nostalgic eyebrows. In the ten years since it first thrilled the market, nearly 50 million Super Famicoms have been sold worldwide. More tellingly, Nintendo has been shifting around three million of the original machines a year, at around ¥5,800 (£28) each. Confidently, Nintendo has hiked the price of the restyled machine up to ¥7,800 (£37). Despite all these figures, to western eyes the company still seems to have a sentimental side. The date of the introduction was Valentine's Day.



The new aerodynamically moulded Super Famicom relaunch coincides appropriately with the grand switching on of the Nintendo Power service, a scheme enabling players to buy a range of software from their local grocery store whenever they pop out for some bread

AN AUDIENCE WITH...

PHIL HARRISON



SONY'S PLAYSTATION MAY HAVE PERMEATED THE CONSCIOUSNESS OF THE VIDEOGAMING MASS-MARKET, BUT HOW WILL THE COMPANY ADDRESS THE PERENNIAL PROBLEM OF UPGRADING ITS TECHNOLOGY AS THE NEXT GENERATION LOOMS ONCE AGAIN? EDGE MET WITH PHIL HARRISON – NOW SCEA'S VICE PRESIDENT OF THIRD-PARTY RELATIONS AND R&D IN CALIFORNIA – THIS TIME TO ASK SOME VERY AWKWARD QUESTIONS...

Photography: Jude Edginton



Phil Harrison has risen through the ranks of Sony Computer Entertainment to become instrumental in the machine's success, not just in Europe, but also in the US where he now resides. **Edge** recently met him in SCEA's home of Foster City, near San Francisco, to try and procure information about the inevitable successor to the PlayStation. At least, that was the plan...

Edge: Traditionally, no videogame company has been able to maintain a dominant position from one generation to the next; Atari lost out to Nintendo's NES, Nintendo lost to Sega's Genesis, and then Sega lost to Sony. What's the plan as the 32bit age winds down to its inevitable conclusion?

Phil Harrison: Speculation about any future technology has to be tempered with the facts. We believe that we're not even 25% done with the original PlayStation yet. Whatever method you use to calculate sales, we're doing great.

Worldwide hardware sales have recently passed the 20 million mark. We've gotten to a point where the hardware is at a low price and there is a very compelling software catalogue. Consumers are buying it in droves. There is nothing to suggest, in any future, near- or medium-term, that the PlayStation is going to run out of steam. So we're not even considering a next generation at this time.

Edge: You're claiming that absolutely no one within Sony's R&D is working on a follow-up to the PlayStation? That could be tantamount to commercial suicide, given that your 32-bit technology will have to be replaced one day, and the original PlayStation took almost eight years to develop in full ...

PH: Well ... [smiles]. It is true that Sony is a very R&D-led company. R&D has been the foundation of our company for more than 50 years. It is also true that the team that created the PlayStation's technology is still on staff.

These people weren't fired, moved off, put out to grass or given a new career path. They're working very hard on a variety of different PlayStation R&D projects, some of which are software-based, focused on delivering better sets of libraries and development tools to our developers so that they can make better games.

Edge: So the majority of your R&D resources are being ploughed into streamlining the development process of titles for the existing PlayStation hardware, as opposed to designing a successor?

PH: That's right. And if you compare today's PlayStation games to the very first ones, you'll see a definite increase in quality. Some of this is because developers are becoming comfortable with the environment and hardware – they're getting to understand it, and they're starting to make it sing. But another significant reason is that at Sony, we have continued to support our developers with new programming libraries. We've created new, more accomplished, more powerful APIs that enable developers to get even more power out of the machine. This has been the primary thrust of our R&D efforts over the last two or three years.

Edge: But the historical precedent within the videogame industry is that when an established platform reaches maturity – and the PlayStation has reached that stage – it's time to start thinking about the next step. Isn't this a danger for Sony – that someone else will attempt to snatch the market from under your nose?

PH: Historically, the driving force behind successive hardware generations has been the need to introduce, rather than merely wanting to introduce, a new technology. And right now there's no need for a new hardware generation.

Edge: Are you talking about the needs of the gaming public – or the needs of the videogame industry?

PH: In all senses of the industry. If you look at the 16bit cartridge model as an example, it ran out of steam – technically, creatively, and commercially.

Edge: Actually, Nintendo had one of its most profitable years with Super NES after the launch of the PlayStation and Saturn. The fact that a console is commercially successful wouldn't seem to guarantee its parent company's future.

PH: You hit the nail on the head: Nintendo made a lot of profit, but the third-party industry was bleeding and coughing blood at the time. The odds were stacked against the industry because of the cartridge model. And the 16bit crash, if you want to use that term, came about because of a lack of creative and technical innovation. The technology created barriers beyond which the developers could not move. You could not do anything else with a 16bit cartridge-based system beyond the rudimentary, sideways-scrolling, eight-direction games.

Therefore, what tended to happen in sequels or iterative versions of games ▶

was that the difference between them was negligible. All the games started to look the same. Consumers could not discern a compelling difference between the prequel and the sequel, therefore they voted with their feet and walked to those formats that *did* deliver creative innovation. And that format turned out to be PlayStation.

Edge: There are a number of gamers who think that PlayStation games are starting to all look the same...

PH: No, I would contest vigorously the suggestion that all PlayStation games are the same. PlayStation games are constantly improving and will continue to do so.

We've just introduced the 2700-based development series, a new PlayStation development system. It's a program analyser and development system all in one, which enables developers to get a global view of what is going on inside the hardware at any one time. This enables them to tune up their software to get a level of technical performance that had previously not been seen.

We've analysed almost all existing software titles, and we're confident that even the best games launched to date exploit less than half of the hardware's potential. Now we've worked out how to harness this extra power. We've delivered this technology into the hands of the developers, and if they're up to the task we will see more and more high-quality products, pushing the technology even further, throughout 1998 and into 1999.

Edge: We were surprised by the achievements of the *Gran Turismo* team. What are your thoughts on this game? Just how much of a step forward is it?

PH: *GT* is currently my favourite PlayStation game – I spent most of the Christmas holidays playing it. I've been following the development of the game for a while and I'm delighted for Yoshida-san, Yamauchi-san and the rest of the team that the game has been so well received.

This is a perfect example of a developer with a vision means that 3D engines and CPU demands can be balanced to achieve optimum performance in the game environment which delivers more polygons, higher resolutions and faster frame rates.

Most important of all is game design. I think that programmers are now comfortable with the PlayStation graphics system and can concentrate on interesting and challenging AI, dynamics or other physical simulations. This is perhaps the biggest improvement seen in the racing genre with *GT* – the real-time dynamics for the car suspension system really works! The programmers were able to allocate CPU resources to handling the dynamics while maintaining a very strong graphics engine.

Edge: Let's approach this from a different angle. Looking back, did Sony succeed in the next generation market-place, or did Nintendo and Sega fail?

PH: It's a good question. Certainly you can say that our



'HISTORICALLY, THE DRIVING FORCE BEHIND SUCCESSIVE HARDWARE GENERATIONS IS THE NEED TO INTRODUCE, RATHER THAN WANTING TO INTRODUCE, A NEW TECHNOLOGY'

and a relentless desire to achieve perfection – and they were given the time to do it. Technically the game is very well executed – but I think the design is what makes it stand out. The simulation portion is well implemented and the whole passing your test thing is great fun, and teaches you the game at the same time. It's definitely raised the bar on the driving genre.

Edge: What efforts are being made within Sony to create games of this standard?

PH: Technically, the level of support we are able to offer our third parties and internal teams means that everyone has the power at their disposal to create games of this standard. New and more powerful tools like the 2700 series development system means that developers can really push the system. Prior to this tool the time and effort required to get any meaningful performance increase often outweighed the perceived benefits to the consumer. Now a game can be written from the ground up with the programmers having full system-wide analysis down to the lowest possible hardware level. This

success, by definition, meant our competitors failed.

Edge: But would you agree that Sega and Nintendo stumbled during the transition from 16bit to the next generation, and that to some extent they left the door open for Sony to march in?

PH: Um, I'll leave it up to **Edge** to pass comment on our competitors' business decisions...

Edge: One last try. Were you impressed with Nintendo's handling of Nintendo 64, or did you expect more?

PH: If you ask me that question as a gamer rather than as an executive of Sony, then from my heart I can answer that I have always respected Nintendo. But I don't think its latest product offering lived up to either the marketing hype or my personal expectations.

But as somebody who works for Sony Computer Entertainment, I have to imagine that our rivals were forced to act because of the strength of the PlayStation, and as a result, they maybe acted prematurely or with more haste than was appropriate, and they made mistakes. But this is not for me to comment on.

Edge: You said that Nintendo lost ground to Sony because third-party SNES publishers were 'coughing blood'. Can these third party publishers, such as Acclaim or EA, force a change of format upon the market? If not, to what extent do the hardware manufacturers do the steering?

PH: It's a symbiotic relationship. The platform holder has to be taking certain commercial risks – ones that a third party is unable to do – in order to push the installed base forward. But you also have to ensure that the rest of the industry rallies around you. And that is why we feel very confident with the PlayStation as a format.

We have no less support than we had two or three years ago. In fact, our support grows in sophistication, quality and investment every day. If publishers weren't making money out of the PlayStation format, they would not be able to invest in development for the future.

The PlayStation format was designed on two solid premises: one, that it would be the creative choice of the development community. But equally important was that it would be a gilt-edged commercial choice for the decision makers that live higher up the food chain within the software publishers. You have to get the balance right between the two. You could deliver the most incredible technology, but if there wasn't a compelling installed base – or hope of an installed base – nobody would support it because the people who write the cheques want to see a return on their investment.

Edge: But while Sony and the main third party publishers concentrate on milking a mature PlayStation market, hardcore gamers will start looking for something new. Likewise, ambitious software developers will start looking for footholds in emerging markets. Won't this give a new, higher-powered platform a golden opportunity to challenge the PlayStation's superiority?

PH: We do not see any competitive technology, be it hardware or software, that will form a significant challenge to the lasting success of the PlayStation.

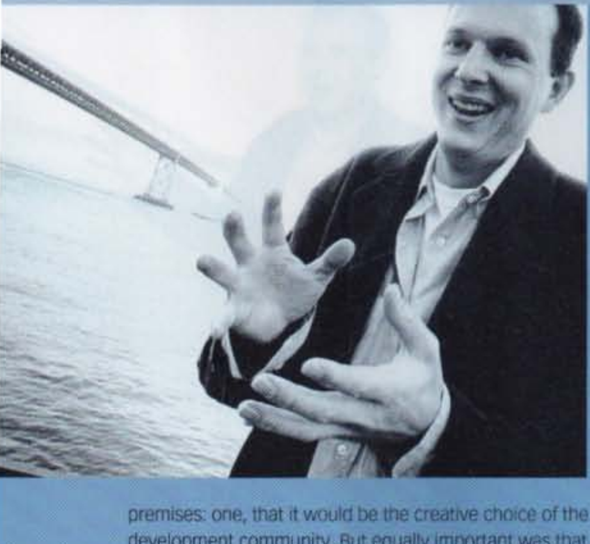
Edge: Let's consider competition from the PC. Given that game developers will always want to work with the most exciting, powerful hardware, how can you ensure that the third parties' best development teams don't switch to PC development? Isn't there a danger, as the PC goes from strength to strength, that in the eyes of developers, console development could become a backwater?

PH: Most programmers, deep down, are artists. They want to express themselves on the broadest possible canvas that has the broadest possible commercial application. The PlayStation is the only format around the world that allows the developer to reach an audience of tens of millions of consumers.

Edge: You don't regard the PC game market as a threat?

PH: The PC is a very polarised hardcore market – a very small number of people buy a lot of software. Yes, there is innovation in the PC market with the 3D graphics cards, but these are saddled to a two, three, four-thousand dollar box. It's neither a mass market proposition nor a technology that's competitive with the PlayStation.

'WE DO NOT SEE ANY COMPETITIVE TECHNOLOGY, BE IT HARDWARE OR SOFTWARE, THAT WILL FORM A SIGNIFICANT CHALLENGE TO THE LASTING SUCCESS OF THE PLAYSTATION'



Edge: In that case, how much of the PlayStation's success would you attribute to its appeal to the hearts and minds of the hardcore gaming fraternity?

PH: We did it by having the best possible games at the best possible price. Consumers reacted positively to what we had to offer, and have been rewarded with a stream of games that shows no signs of slowing down.

Edge: But now, by your admission, 'a small number who buy a lot' – in other words, the real hard-core gamers – are playing on the PC. Isn't there a worry that where the hard-core gamers go first, the casual gamers follow?

PH: I don't believe that to be the case. The PC market is very insular. It doesn't grow, it just regenerates itself on a regular basis by forcing the same consumers to invest more money in the same box, or buying a new box because they need to get a Pentium II or 3Dfx or what have you. The PC does not permeate the mass market the same way that a sub-$200 videogame system can.

Edge: Hasn't the explosion of interest in the PC as a games machine surprised you at all?

PH: We predicted that the PC's performance would improve. The fundamental law that governs the performance of PC technology is a straight, upward line. We knew this would happen, and it doesn't necessarily threaten the PlayStation. It's a different market; it appeals to a different kind of consumer. And as we penetrate the mass market, the difference between a PlayStation consumer and a die-hard PC consumer broadens.

Edge: Another big attraction for gaming on the PC is the potential for online play. The PlayStation doesn't have a modem – is this a shortcoming?

PH: No, because nobody makes any profit from selling online games. It has become more of a 'feature' for PC games – a bullet point on the box – than a business model to add to the profit potential of any one title.

Edge: What we're establishing here is that you're not ▶

◀ **afraid of any other videogame company...**

PH: The PlayStation is so successful now because some very perspicacious people in Japan made some very inspired choices about certain forms of technology in 1993. They forecast that by the time we got to 1996/1997, the price, availability and supply of this technology would be broad and cheap enough to deliver a $150 box. As you know, we launched at $300 in the U.S. and at $400 in Japan. Yet we were still losing money on the hardware, even at these prices. But we knew, because of some very inspired decisions, that we would be riding a downward curve in price – and that come 1997, we could offer this technology at a competitive rate.

Any new company that enters the business must have a similarly broad view of what's going on in the chip and production technology markets. It has to have skills which, frankly, very few companies in the world have.

Building two million PlayStations is no mean feat, and it involves a whole department of people whose job it is to ensure that we have a constant supply of PlayStation components from more than one hundred different sources. To succeed doesn't just take a bag full of cash and some smart technology. Success requires you to master the control of some very sophisticated, interconnecting elements. While I'm sure there are other companies that have a piece of the pie, I don't believe there is any other company that could bring all the pieces to the table at the same time.

Edge: So if you're that confident, do you see the PlayStation as having any form of competition?

PH: Our competitors in the big, big sense are other ways in which people can spend their disposable time. There are only so many hours in the day that can be expended on entertainment – a certain number of hours are dedicated to sleeping, eating, working, or going to school. Only after these things can people watch television, he doesn't buy music per se. He buys software. It just happens to be a radically different form of entertainment from what I consider to be entertainment.

I think that we will see the PlayStation evolve into a multi-use device that isn't inherently linked to one form of entertainment or another. In fact, this is one of the reasons why we don't bundle any software with the the basic package, and a major reason for the neutral design of the case itself. It doesn't shout one particular form of entertainment or another. It's a player for all sorts of entertainment rather than a hardware device that you happen to get with a character-based action game.

Edge: But the overwhelming majority of PlayStation's titles are driving, shooting, fighting, and guiding-a-marsupial-'with-attitude'-through-a-fantasy-world games. How do you plan to expand into a broader base of themes?

PH: Well, first of all, nobody should belittle the significance or importance of driving, shooting, fighting, and guiding a marsupial through a fantasy world. These games are bastions of our marketplace and will continue to be very significant portions. Our job now is to grow the



'THE PLAYSTATION WILL EVOLVE INTO A MULTI-USE DEVICE THAT ISN'T LINKED TO ONE FORM OF ENTERTAINMENT OR ANOTHER. THIS IS WHY THE CASE DESIGN IS NEUTRAL'

watch a rented movie, listen to music, or enjoy some new form of entertainment. Sony's challenge is to present to the consumer a very compelling set of products that enable them to change and shift their attitude towards interactive entertainment – perhaps even to affect the way they consume media in a wider sense

Edge: So your goal is to incite more and more people to spend ever-increasing portions of their free time playing with interactive entertainment?

PH: Absolutely. One of Sony's fundamental goals is to establish legitimate forms of entertainment that are far removed from the games we are raving about today. We will have consumers who look at their PlayStation as a totally different form of entertainment device.

I'll give you an example of what I'm talking about. Entertainment with a CD player to you might mean 'The Ramones Greatest Hits', but to me it means a totally different type of musical entertainment. To my dad it means classical music – he stares with slack-jawed horror at most contemporary music, but that doesn't mean PlayStation appeal beyond the core gamer.

One example is *PaRappa the Rapper* – just one tiny step down the road towards new forms of entertainment. It sticks out right now when compared to the fighting, driving and action games that are traditional in the marketplace. But two, three, or four years from now, these new forms of entertainment won't stand out quite so obviously because they will become accepted staples within a new and very, very interesting marketplace.

Edge: You have to admit that one day the original PlayStation will become outdated. Hypothetically speaking, what would you expect to find on the spec sheet of the dominant next generation machine?

Phil: Well, there is a checklist of technology that everybody seems to talk about at the moment. This stuff is considered cutting edge now, but we know, from Sony's view of the world, that it will appear old hat very quickly. So anybody who tries to place a stake in the ground today and predict the future has got to be very brave indeed. And I'm not gonna be first... ■

PRESCREEN INTRO

A roll call of the newest arrivals in the world of videogaming

Hitting the bump stops

Why do PC racing titles so far short of their console brethren?

It would be easy for a bystander to assert that 'a racing game is just a racing game'. Superficially, such titles appear particularly simple, needing only a few cars, plus a track or road – and that's about it. From videogaming's earliest days, developers have sought to recreate the driving experience, playing around with every conceivable aspect of the theme. Formula 1, rallying, go-karting, road racing, test driving and a suitcase-full of subgenres have been subject to dozens of electronic interpretations, on every imaginable platform.

Given the wealth of reference points available for developers to call upon, that stranger to the scene should have a valid point, yet so many driving games, particularly for the PC, just aren't up to scratch. Regular subscribers to **Edge**'s opinions will already be reaching for **E**53's review of Codemaster's *TOCA*, but they would be misinterpreting the point being made. *TOCA* is a multiformat release, and it is PC-specific racers that stand accused here. Compared to the number of ways console owners can indulge their need for speed, followers of the Lord Gates seem damned to forever grind along the hard shoulder of car gaming.

In recent times only Milestone's ***Screamer Rally*** has been of notable quality for the PC (see **E**53), with **Edge** hard pressed to recall a similarly outstanding title within the last 12 months. More typical of the breed is Kalisto's *Ultimate Race Pro*, reviewed this issue, which misses many of the targets set by its console equivalents. Its core maladie is a lack of structure, removing a sense of reward for the player once stages have been completed. This is a factor that is often well executed in console driving titles, with hidden cars, tracks and special effects all becoming available after winning races. Obviously if the underlying game is poor, then none of the above matters, but modern gamers should expect every facet of their requirements to be sated.

As in every other PC genre, the use of 3D acceleration is laying fresh tarmac every day for future racing games to utilise. Digital Illusion's *Motorhead* (see Alphas) is one of the new breed of forthcoming PC racers and is currently looking promising as far as the visual and handling departments are concerned.

The traditional argument that only the PC can play host to 'serious' racing games (such as *F1GP2*) has been quashed with the arrival of the PlayStation's *Gran Turismo*. Sadly, **Edge** feels it will be some time before a game of similar sheen graces PC monitors.





Screamer Rally **(left) leads a field of one, as a quality PC-only racer. Multiformat fare, such as *TOCA* (centre) is typically strides ahead of dedicated PC titles like Kalisto's *Ultimate Race Pro***

Index

Edge's most wanted

The videogames making waves before their arrival



Legend of Zelda 64

(N64) Nintendo

Having played the Space World demo version extensively, **Edge** can't overstate just how much potential is harnessed within this 256Mbit cart.



Bust a Move

(PS) Enix

With Parappa's rap happy beats still echoing around its walls, **Edge**'s anticipation for Enix's innovative title is (perhaps) understandable.



Forsaken

(PC/PS/N64) Acclaim

If the 3Dfx version **Edge** has seen is anything to go by, Acclaim could have another success on its hands. AI and visuals are simply top notch.



Tekken 3

(PS) Namco

The lean, mean fighting machine returns. If N64 owners are feeling a pang of envy after *Gran Turismo*, their suffering is about to double.



1080° Snowboarding

(N64) Nintendo

Nintendo's potential snowfest offering should reach **Edge**'s office soon, having already caused endless arguments over who will review it.

PRESCREEN ALPHAS

Revised and refreshed, this month's Alphas are kick-started by a searing PC blaster from Psygnosis

TELLURIAN DEFENDER













Developed in the UK, Psygnosis' latest project has, at first glance, much in common with Nintendo's *Star Fox 64*. Navigating around the expansive environments, players must defend a meteor-battered earth from alien invasion. Delving deeper into the projected list of gameplay elements reveals plans for that catch-all factor, 'resource management' to augment the action. However, trigger happy PC owners need not despair, as the strategy is an adjunct to *Defender*'s shoot 'em up roots

DUNE 2000





While *Command & Conquer* made Westwood Studios' name, 1992's *Dune 2: Battle for Arakkis* blazed the trail that *C&C* followed. Now the Las Vegas strategy overlord has refitted the *Dune* license with the various improvements wrought on the *Conquer* games. Most significant is the implementation of an Internet multiplayer game, coupled with updates to the AI and interface. Interested parties should mark May 1 in their diaries





RAMPAGE: WORLD TOUR

Cult arcade munch 'em up. *Rampage* has already been treated to updates on both Saturn and PlayStation. Rather than leaving N64 owners out in the cold, Midway (published in the UK by GT Interactive) has created a unique version of the game for them. The three player game (missing from other versions) will make the transition to the N64 iteration, which will be arcade perfect





BOMBERMAN HERO: QUEEN MILIAN'S RESCUE















Anyone with even a modest affection for videogaming will have shed a tear over the failure of *Bomberman 64* to pass muster. Perhaps realising the error of its ways, Hudson Soft has rapidly announced this sequel, dubbed *Bomberman Hero*. While visually similar to the first game, a (much-needed) structural revamp is underway. The explosive adventurer can now utilise several props, from snowboards to rocket packs. Expect further details soon

MACE: THE DARK AGE

While the N64's version of Atari's *Mace* coin-op failed to impress (six out of ten, **E**54), Midway has pressed ahead with the game's conversion to PlayStation. While unlikely to scrape the title's head on the ceiling of **Edge**'s marking system, the rumoured improvement to the frame rate should at least make *Mace* more responsive



RECKIN' BALLS





Pencilled in for a May release in the US, Acclaim's *Reckin' Balls* is a 'crazy' on-rails racing title for the N64, suspiciously reminiscent of DMA's unsung SNES hero *Unirally*. Against CPU, clock or another primate, the player must successfully guide one of the eponymous globes in the chase to the course's peak. Standing in the path of victory are gaps in the tracks, only passable via the timely deployment of a grappling hook fitted to each ball





GRUESOME CASTLE









Anonymous antipodean developer Gee Whiz Entertainment recently posted a demonstration version of this 3Dfx platform/adventure *Gruesome Castle* on American site, Next Generation Online. **Edge** was surprised to find a remarkably detailed and diverting game, gifted with play mechanics part-way between *Super Mario 64* and *Monkey Island*. Hardware acceleration imbues *Castle* with all the visual fizz required, and an *MDK*/*GoldenEye*-style zoom mode (once a pair of binoculars has been obtained). A distributor has yet to be confirmed





GUN GRIFFON 2





While the Saturn's popularity may be on the wane in Western markets, Japanese punters who have kept the faith will soon be treated to *Gun Griffon 2*. Produced by long-standing Sega specialist Takeshi Miyaji, *GG2* is an epic Mech battle game, notable for the macro-scale research undertaken for its development. PlayStation and N64 versions have been ruled out, while a certain next-generation Sega platform beckons





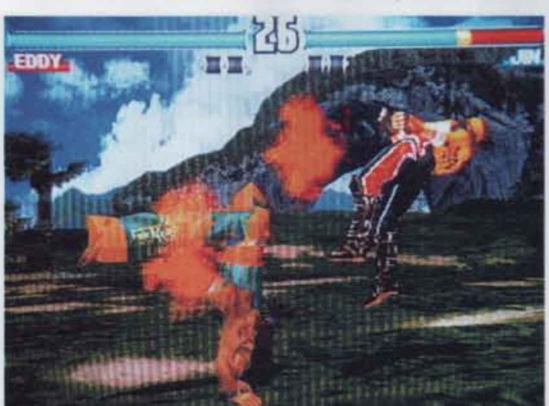
TEKKEN 3















The latest images from the PlayStation version of Namco's *Tekken 3* reveal that work is continuing apace. As suspected, 3D backdrops have been retained, at least for certain stages. Although Namco describes this as only 40 per cent complete, transparency effects – and swordsman Yoshimitsu – look impressive. In similar fashion to the previous *Tekken* titles, certain attacks are bone-crunching in effect, and acrobatic in execution. Expect a Japanese release on March 26, if all goes to plan, with a US date in April and a PAL version third-quarter

QUAKE 2 CTF

Id Software has confirmed a forthcoming set of *Capture The Flag* multiplayer missions for its PC grand-slam, *Quake 2*. Drawing inspiration from classic playground games, *Capture The Flag*'s name pretty much explains the goal; to steal the opposing team's banner. Obviously, the inclusion of *Quake 2*'s varied arsenal makes for a rather more dangerous experience than a game of 'tag'



INCOMING





Further to last issue's extensive Prescreen of the game, Rage quickly delivered these fresh screenshots from *Incoming* to **Edge**. Increasing in visual magnetism by the day, Rage's action-fest now boasts a splitscreen two player mode (below right), and two fresh environments; desert (below left) and over-sea. More explosive effects, plus a variety of extra craft, continue to be added. See News for screens produced by Intel's AGP port

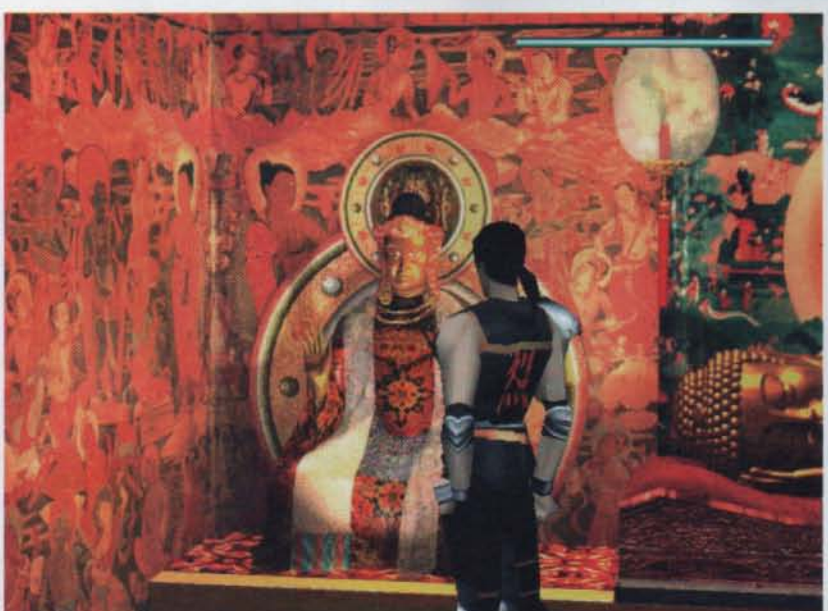




ENIGMA









Flying in fresh from Japan comes Koei's *Enigma*. Initially similar to *Resident Evil*, its gameplay actually falls somewhere between Capcom's classic and a scrolling beat 'em up of the *Double Dragon* variety. Originally bundled with Videologic's PowerVR card (a package that can now be found in Tokyo for around ¥9,800 (£47)), from where these screens are taken, *Enigma* is now en route for the PlayStation. Adding variety to the game's fight sequences, Koei has included both hand-to-hand and armed combat, with interest underpinned by a simple tale to explore





ERGHEIZ




After frantically playing Square Soft's one-on-one fighting game at ATEI, **Edge** can heartily recommend it to fans of the genre. As mentioned in **E**52's Prescreen, *Ergheiz*'s multilayered arenas greatly expand the options available during combat, with certain stages spread across three levels. Published by Namco, the game also offers solid animation and collision detection (so often lacking from beat 'em ups), and well-paced action




REBOOT







Based around a fairly obscure American cartoon, EA's *Reboot* steals Marty McFly's hoverboard from 'Back to the Future 2' and uses it to facilitate a sci-fi romp around the TV series' themes. Hopefully the tricky control system will be sorted by the time it's released this summer

ROAD RASH 3D




Although scheduled for a March appearance, very little has been seen of EA's PlayStation and PC interpretation of its likeable bike 'em up title, leading **Edge** to suspect it will suffer from delays. As subtly hinted at in the game's title, this time around the action takes place in 3D landscapes





F-15

Jane's Combat Simulations has carved itself a (well deserved) reputation for fantastically detailed recreations of military aircraft on the PC. The group's latest creation *F-15* does nothing to buck the trend, featuring the now-obligatory 3D acceleration. The controls are remarkably easy to master, given the complexity of the aircraft, although **Edge**'s loops soon had the pilot blacking-out





URBAN ASSAULT





Previously known as Anarchy, this action/strategy title from German developer Terratools Computer Graphics Solution promises to take the genre one step further by combining realtime strategy with action elements over 30 levels played either in single or multiplayer mode. The game is best described as a 3D *Command & Conquer*. Whether it delivers what it the promises will be seen when the game is released later this year





MARS MANIACS

Still without a publisher at the time of writing, this 3Dfx racing game from the multinational codeshop Church of Electronic Entertainment, is technically highly impressive. Set on Mars, players get to race around in jet-propelled futuristic vehicles inspired by 1950s US muscle cars. These were designed in France by a team who also contributed design work to Luc Besson's 'The Fifth Element'









G.A.S.P.











Work continues on Konami's title (release date has yet to be determined) which would benefit from slightly more responsive controls and special effects if it's going to take the N64 beat 'em up title. In its favour, it boasts a healthy frame rate with some nicely animated and detailed characters

MOTORHEAD





After Kalisto's beautiful but somewhat empty *Ultimate Race Pro* (see Testscreen p98) Digital Illusions' decision to concentrate on AI for *Motorhead*, its new PC racer, seems wise. The developer claims there are no pre-defined routes in *Motorhead*. Rather, each driver has a unique personality and makes realtime decisions. But with a top resolution of 1,600 x 1,200 at 50fps, it's hardly a dog either





SEGA RALLY 2




These new shots of a near-completed version of the sequel to Sega's highly successful, first arcade rallying venture illustrate the treacherous snow-covered stage and the extent that the developers have gone to in trying to recreate a realistic atmosphere. Such details as spectators scattering out of the way of an incoming vehicle (far left) and drowning the action in a sea of frantic flashlights (below) are impressive





RECOIL

While Activision's revamped *Battlezone* follows the current vogue for tangling strategic elements into a 3D combat game, *Recoil* remains staunchly true to the formula the Atari original defined. Players must guide a futuristic tank through 30 missions spread over six worlds, and – somewhat unusually – hardware acceration is not compulsory for players to enjoy the game



DEAD OR ALIVE













Having emerged from the arcades and graced the Saturn with a particularly playable version (see **E**53), Tecmo's beat 'em up will soon arrive on the PlayStation. Having carried over the best features from the Saturn adaptation, the game will also include additional touches such as new stages, extra characters and alternative outfits. However, the most significant change – in terms of playability – will be the promised Dual Shock compatibility

VIGILANTE 8




Players eagerly awaiting the PlayStation interpretation of Activision's very enjoyable *Interstate '76*, might be interested to learn that the project has transformed itself into a car combat sim and (regrettably) appears to have lost most of its seventies-influenced atmosphere. However, initial impressions of its replacement are good, with commendable car physics, imaginative environments, powerful weapons and relentless action




BIO FREAKS








Nintendo 64 fighting games are now coming thick and fast. Desperately trying not to follow in the footsteps of Midway's previous assault on the genre, *War Gods*, is *Bio Freaks*. Developed in the UK by Saffire, rapid battles and skin-soft texture mapping are two of the game's plus points

BANJO-KAZOOIE




Rare's soon-to-be-released colourful extravaganza is still scheduled for a March release, and these latest screenshots offer further indication of what awaits players. Considering the playable versions **Edge** has seen recently, gamers can confidently expect another title displaying all of Rare's game design skill coupled with the N64 expertise the company has consistently shown over the last year




G-DARIUS

Taito's PlayStation conversion promises to be a faithful representation of the arcade shoot 'em up, with all of the numerous, gigantic and rotating sprites making an appearance throughout the game's 15 zones – featuring 30 areas. Judging by the game's current form, the finished version could prove a contender for the current leader of the genre, *Ray Storm*



SILICON VALLEY

So far, DMA has proved to be the least productive member of Nintendo's 'Dream Team', so expectations for this retro-tinged space adventure are correspondingly high

DMA, a champion of eclectic, innovative game concepts, was a natural choice for Nintendo's 'Dream Team'. With a track record including *Unirally* for the SNES, *Hired Guns* for the Amiga, the universal hit *Lemmings* and, more recently, the controversial *Grand Theft Auto*, DMA has a burden of expectation to live up to. **Edge** was privileged to be granted a preview of its first N64 project *Space Station Silicon Valley*, and first impressions are very favourable.

Germinated in the fertile mind of DMA's 'full time guru' David Jones (now also creative director at parent company Gremlin Interactive), *Silicon Valley* requires the player to regain control of an ancient space station that has reappeared after a thousand-year absence. Complicating matters are the oddball descendants of the ship's 'Nanobots', created as part of the craft's experimental mission to create 'living' robots.

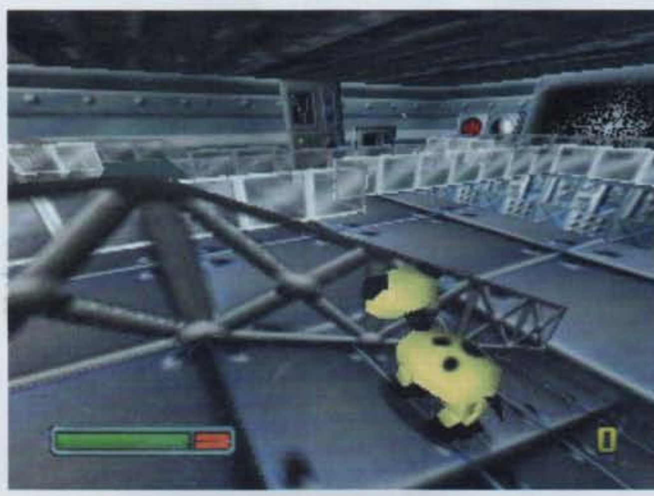
In the millenia since the ship's disappearance in 2050, the Nanobots have evolved into forms that will go down in history as some of the strangest game characters to have originated from designers operating within the western hemisphere. Players will be confronted by menagerie of mind-bending, acidic scope, from dancing sheep and flying dogs to juggling bears and rocket-wielding foxes.

Once an impressively specced battle droid (dubbed EVO), the player's character begins the game in the denuded form of a box of chips following an unfortunate encounter with the space station's surviving defences. What makes *Silicon Valley* particularly interesting is that this rather less than impressive package can still be used to seize control of all of the game's creatures





Some of the characters appear to be better realised than others...





Snow-themed sections may not scream originality, but DMA will doubtless offer a surprise or two to prevent the game being predictable



Format:	N64
Publisher:	Gremlin
Developer:	DMA Design
Release:	Winter
Origin:	UK









DMA's designers have unleashed their apparently unhinged imaginations with aplomb – there won't be many games with characters to rival those of *Space Station Silicon Valley*



Unsurprisingly, not all of the game takes place in outdoor settings

and their abilities. Gamers with long memories (and a history of good taste) will doubtless recall Andrew Braybrook's 8 and 16-bit classic *Paradroid*, which featured a similar gameplay system. DMA's **Brian Baglow** concurs with this, although he adds that '*Paradroid* didn't allow you to kill sheep or catch flies with your tongue.'

The space station's cavernous interior has afforded the designers room to breathe. *Silicon Valley* boasts 30 levels spread over five distinct environments; EuroEden, Arctic, Jungle, Desert and, finally, the ship's control room. Following the *GTA* precedent, there will be a number of sub-missions within each stage. Completing all these peripheral tasks in addition to the levels proper will reveal a set of extra stages; and, given the cartridge's 64Mbit (8Mb) size, there is reasonable scope for *Silicon Valley* to contain as rich a variety of locales and creatures as *Super Mario 64*.

Silicon Valley's colourful visuals might cause it to be pigeonholed alongside Nintendo's traditional cutesy, inoffensive fare. However, Baglow doesn't necessarily agree with that view. 'Some people will see this as a kid's game simply because it doesn't have a rocket launcher and heads bouncing off walls. They're wrong – *Silicon Valley* has a very, very twisted storyline that will definitely appeal to a "grown-up" audience. I'm not going to tell you exactly what it is, though...'

The enigma that Baglow is so keen to preserve for the present will be exposed later this year. The nine-strong development team is optimistic that *Silicon Valley* will be one of next Christmas' must-have titles; **Edge** sees little reason to doubt it.

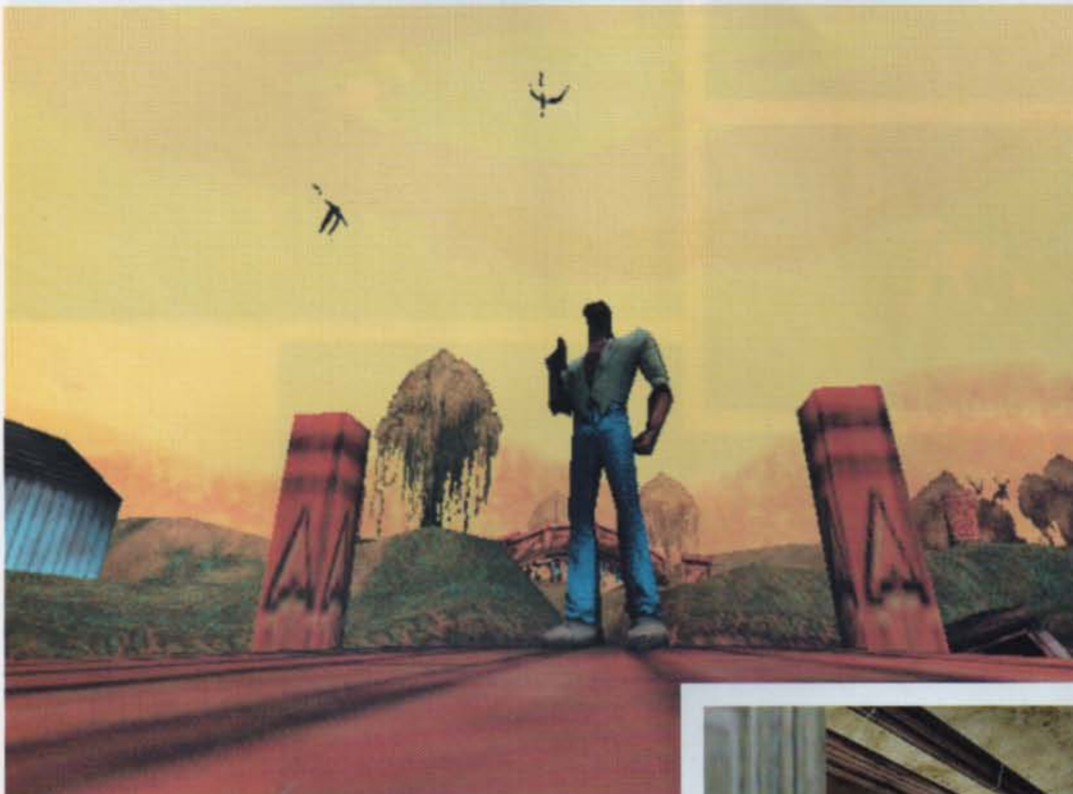




Despite their polygon nature, the characters manage to exude a high degree of charisma

SHADOW MAN

Acclaim's comic book rights gave Turok a wealth of leftfield comic book credibility. Can Iguana UK utilise Shadow Man's similar roots to forge a success?







Shadow Man boasts vast locations, with exterior settings blending seamlessly into detailed interiors. The cake is iced with gruesome colours



Resident Evil has met its match, in the gloomy locations war, at least

Format:	N64/PC
Publisher:	Acclaim
Developer:	Iguana UK
Release:	Autumn '98
Origin:	UK

Shadow Man, another of Acclaim's comic book properties, has lingered on the periphery of specialist store shelves for much of its existence. But all that may change now that he is poised to become the hero of his own game – one that should turn as many heads as stablemate *Turok: Dinosaur Hunter* did before.

Following its exclusive first look at the game in **E**47, **Edge** returned to Iguana UK's Stockton-on-Tees headquarters to gauge the game's progress. *Shadow Man's* conception was relatively simple, although its story is anything but. 'We created the engine,' Iguana UK's creative director **Guy Miller** says, 'and Acclaim said, 'here are some comics – which one would you like to do?' There were about eight of them, but we picked out *Shadow Man* immediately.'

What the team found was the dark and complex tale of a dead man named LeRoi, who travels between real life and a netherworld called 'Deadside', wherein he possesses the voodoo power of the Shadow

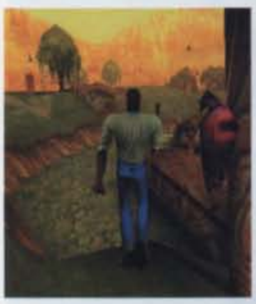


Man. LeRoi is also a professor of English literature – and an assassin. Iguana has done well to translate the character's richness into a videogame environment.

Assuming the role of Shadow Man, the player must prevent a cadre of dead mass murderers from opening up gateways to the real world through which the armies of darkness can pour forth. Play shifts from Deadside to the living world and back again, with the player being forced to cope with juggling the roles of LeRoi and Shadow Man









As these screens show, there's some way to go before *Shadow Man*'s non-player-characters are fully deployed. However, crocodile grappling could become next winter's favourite extreme sport (top left)

TAKING THE ROLE OF SHADOW MAN HIMSELF, PLAYERS MUST PREVENT A CADRE OF DEAD MASS MURDERERS FROM OPENING UP GATEWAYS TO THE REAL WORLD

while evading the murderous pursuers. Depending on which world the player is in, enemies take on different physical forms or adopt cunning disguises.

'We've taken "Seven", "Silence of the Lambs", "Jacob's Ladder", all those thrillers,' says Iguana UK's Project Manager **Simon Phipps**, 'and we've tried to mimic the coolest parts.' Phipps is adamant that Iguana's new 3D action/adventure engine will take the horror genre to the next level. 'You can't make people laugh easily in games,' he begins, 'and you certainly can't make them cry. But you can scare them.'

Already apparent are the technological advances that will set *Shadow Man* apart from the rest of the pack. Of particular note is the game's AI, and the vast dimensions of many of the game's locations.

Shadow Man's range of movement is also a step forward. 'The technology should not stop you from doing things you want to do,' says Phipps. So instead of holstering a gun before rolling forward and producing a key, the player can now do it all in one move.

Iguana began by creating the real-world elements of the game (set in New Orleans) before dreaming up the Deadside. Inspiration lay close at hand, however, among Northern England's industrial debris. 'We've drawn on some local locations,' Phipps explains. 'We wanted a Cronenberg-esque look that would make the player feel uncomfortable.'

Both Phipps and Miller were once employed at Core Design, and one design priority of *Shadow Man* was to implement concepts and features that were compromised during *Tomb Raider*'s gestation. 'We want to take the story and weave it into the game so you are exploring it as you progress,' says Miller. 'What you usually get with games is this incredible back story, and then the game comes along and you just run around shooting stuff.'

If *Shadow Man* lives up to its creators' expectations, N64 and PC owners will have an autumn to remember.



***Shadow Man*'s art direction reflects many of the current trends in comic book design, creating unique and fascinating locations, with rich colour**







If truly inspired by its locale, Iguana UK should perhaps consider a change of scene...

REDLINE RACING

While most developers bitten by the racing bug might go down the typical car-based road, Criterion Studios is taking an alternate route in releasing a bike-related arcade experience











If the version Edge played is anything to go by, the other riders facing the player should prove formidable opponents in the final version. The racing action also seems close, with participants swapping positions endlessly

Format:	PC
Publisher:	UbiSoft
Developer:	Criterion
Release:	March
Origin:	UK

Given the success of PC *Moto Racer*, it is surprising to find so few examples of two wheeled vehicle-based titles among the ever-increasing racing genre. Despite the fact that car motorsport is more widespread that its bike counterpart, this is still an odd set of circumstances given that motorcycle racing has a huge following and, when competently developed, bike games can provide as exhilarating an experience as any four wheeled racer.

Commendably, rather than adding to the burgeoning quantity of car-based racing games, Guildford-based Criterion Studios is attempting to steal the laurels from Delphine's genre leader. 'We figured racing was the experience we wanted,' explains **Jonathan Small**, Criterion's head of game development. 'We figured PCs now have the performance to provide the full arcade experience… good bike racing games were rare and had some fundamental differences to car racing games, not least the vulnerability of the rider.'

Perhaps predictably, the physics models proved to be the most testing challenge. 'This turned out to be an exceptionally hard problem – how does a human ride a bike? Ask a bike rider and you get some pretty weird answers,' declares Small.

'You don't need to turn the front wheel to steer the bike, it's all through weight… then



Because of its arcade-style approach, the range of courses in *Redline Racing* encompasses the full breadth of orthodox racing environments







of course bike riders know when the corner is coming and therefore start their motions well before it. Using normal computer controls, this would require the game controlling the rider to predict what the rider would have to do. Modelling people's intentions, mmm... all of a sudden a car racing game seemed incredibly attractive.'

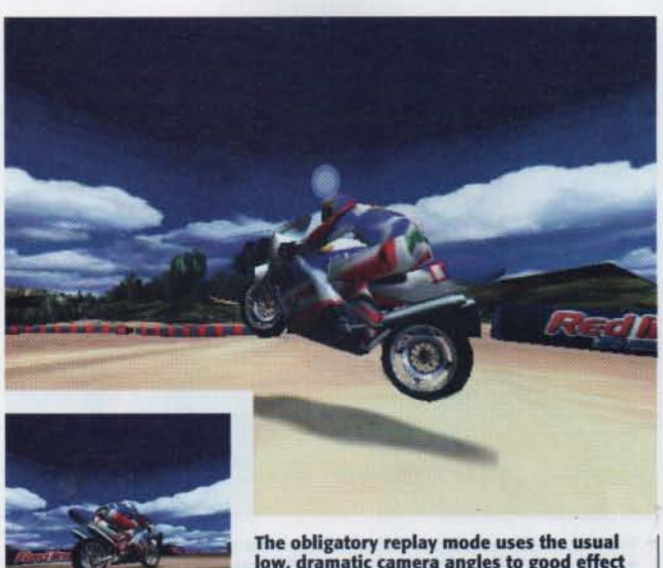
At one stage of development, the team had ten different physics models running, including one which attempted to emulate a real rider's approach to a corner. '[It] sort of worked except that it was bloody hard to control and fundamentally, it wasn't that much fun,' says Small. 'It was cool, though – you could blow the bike up and have the wheels bouncing down the road, and you could move the weight of the rider and watch its effect on the suspension.'

Yet Criterion stuck at it and the resulting *Redline Racing* offers players the chance to race on a total of ten (reversible) tracks featuring four different environments – English countryside, desert canyon, alpine, and beach – against 19 other competitors. The usual arcade, time trial and network options as well as force-feedback joystick support complete the package.

Visually the game is also impressive, with highly detailed scenery whizzing past at very smooth and fast rate, courtesy of Intel's AGP acceleration which permits greater data throughput between the CPU and the video card. Criterion is not including a software version so potential bikers will have to – if they haven't already – invest in a pukka 3D card. The resulting racing environment, particularly the snow course, with its realtime lighting, weather and particle effects somehow justifies the expense.

As with any racing game, there are extras to reward players and keep their interest in the title. As such, an eclectic collection of bonus vehicles – which includes an airborne speeder bike in the style of 'Return of the Jedi' – awaits selection. In addition, Criterion will be offering *Redline Racing* players the opportunity to download extra tracks and vehicles from its website.

The version **Edge** played posed a particularly tough challenge, with very little room for error. Whether this might prove too much for some players remains to be seen, yet things are looking good for Criterion. In its present form, *Redline Racing* boasts better visuals and a more elaborate physics model than any of its predecessors and may also deliver the most convincing arcade-like experience so far.



The obligatory replay mode uses the usual low, dramatic camera angles to good effect



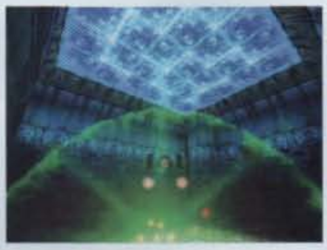


The alpine sections in the game feature some impressive – and apposite – weather

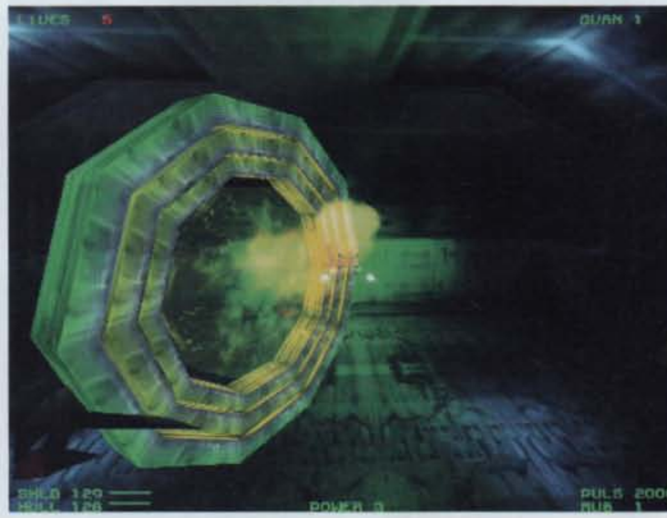
FORSAKEN

The success of *Turok: Dinosaur Hunter* gave a struggling Acclaim a shot in the arm last year. Can a new *Descent*-alike further re-establish the American-owned softco as a major force?









All incarnations of *Forsaken* will support multiplayer gaming. On a PC up to ten players can meet over a LAN or the Internet while the PlayStation and the N64 treatments will offer two and fourplayer modes respectively





The debt that Probe's game owes to *Descent* is instantly obvious

Format:	PS, PC, N64
Publisher:	Acclaim
Developer:	Probe/Iguana
Release:	June
Origin:	UK

For far too long, the otherwise admirable concept of cross-platform development has been flawed by lazy execution. Happily, Acclaim's approach with *Forsaken* is more enlightened than a rushed port.

This 3D blaster will come in N64, PC and PlayStation flavours. But while each adheres to the same template, which **Edge** reported on from the offices of Probe in **E**47, the N64 game is markedly different in both plot and play. Probe's involvement continues on the PC and PlayStation versions, where *Forsaken* is set in a post-apocalyptic future. The solar system has been accidentally irradiated and, after the precautionary installation of anti-theft droids, abandoned. Assuming the role of a scavenger, the player takes to an anti-gravity pinocycle and seeks fortune through exploration and confrontation.

Acclaim's brief was for a significantly different game, 'more Nintendo-ish' according to Iguana UK's project manager **Bob McCracken**. For starters, Probe's free-for-all plot has been replaced with a heroic quest. In *Forsaken 64*, the robots are now a ruthless force that has conquered the Earth. In turn, the characters are warriors striving to overthrow them. It's amazing what a bit of PR can do for a space pirate.

With subterranean passages, robot guardians and 360 degrees freedom of movement, the resemblance to Interplay's seminal *Descent* is unmistakable. But Probe's aim is not to copy but to evolve the genre. *Forsaken* offers lots more variety on all platforms than *Descent* ever did. The player has 11 characters to choose from, each with different driving and combat abilities. And *Forsaken*'s 16 disparate levels should also keep things fresh.



The PlayStation version of *Forsaken* has been massively optimised with assembly code in an effort to keep up with the other two formats







Nintendo owners are treated once again to two- and fourplayer split-screen gaming



Empty slots can be taken up by CPU players in *Forsaken 64*







The specially commissioned soundtrack to *Forsaken* is being created by a two-man outfit known as Swarm, and their ten tracks are due to be remixed by 'name' DJs. Sadly, Acclaim has so far refused to name any names

'It's not just one brown level followed by another or a mine followed by a mine,' as Probe's director of development, **Tony Beckwith** was happy to explain. 'We have a capsized ship, a space station, Bio-domes, Aztec temples and loads more.'

There are also a healthy variety of weapons, centred around three types – guns, mines and missiles. 'It's been cleverly thought out,' claims Beckwith. 'There are instant-hit, spreadfire and bouncing weapons. The player has to think tactically.'

On an accelerated PC, *Forsaken* looks stunning. The lighting effects are particularly noteworthy, with most objects emitting their own glow. But Beckwith is most proud of the water, boasting 'when drips splash into the water, it causes ripples to expand outward in concentric circles. It looks impressive on all three formats.'

On the PC, it's all done with Direct 3D, although Beckwith claims that observers mistook an earlier self-playing demo for a Glide-driven 3Dfx game. **Edge** has also witnessed *Forsaken* running on a Creative Labs 3D Blaster Voodoo 2 to dazzling effect.

The PlayStation version obviously struggles to match such turbo-charged PCs. Heavy use of Sony's new PlayStation Performance Analyzer and painstaking optimisation with assembly code is Probe's strategy for tackling the greying console.

After *Turok*, Iguana's technical expertise with Nintendo's console is already beyond doubt. Perhaps more interesting is the extent to which the codeshop has taken on board Nintendo's mindset. 'Design-wise, we have adopted the Nintendo design principle of rewarding both ends of the gameplay spectrum,' McCracken says. He sees these extremes as the 'speed player', who needs enough missions, graphical effects and challenges to pick up and put down the game in an hour, and what he terms 'bump panel players' – gamers who leave no stone unturned in their search for secret levels, bosses and exotic weapons.

Weapons and characters will remain the same, although there are only eight of the latter on the N64, but probably the biggest difference lies in the level designs. The N64 version will have 23 levels in all, based around five types: collect, defend, destroy, clear and boss missions.

'We don't want to say too much at the moment, but the game experience evolves and expands depending upon the skill and inquisitiveness of the player,' says McCracken. 'And this doesn't mean putting them through the same missions again but with twice as many enemies.'

Edge awaits all three versions of *Forsaken* with relish.





Coloured lighting and a big boss from the PlayStation's *Forsaken*



The wide tunnels and spaces in *Forsaken* are impressive, but Edge wonders if gamers will miss the claustrophobic atmosphere of *Descent*

HOLY MAGIC CENTURY

Now that the PlayStation has the definitive RPG in the form of *Final Fantasy VII*, the N64 has some ground to make up. Along with Nintendo itself, Imagineer is taking up the baton...





The environments in the game rival those of the forthcoming *Legend of Zelda: Ocarina of Time*, offering some quite astonishing views (top)





Battles see 'range' boundaries popping up around the character and his foes. Although players can use hand-to-hand combat, magic is preferable

Format:	Nintendo 64
Publisher:	Konami
Developer:	Imagineer
Release:	Summer
Origin:	Japan

Originally dubbed *Quest 64*, Imagineer's RPG seemed destined to disappear into the black hole of rhetoric that has consumed so many potential N64 titles. Happily, however, **Edge** can now confirm that *Holy Magic Century*, as it is now known in the west, is in excellent health and set for release in the UK by Konami this summer.

Century is based around the adventures of a young boy (currently named Shanjanque, although such details are particularly subject to change), gifted with powers over the four elements. He must employ his magical abilities to aid him as he searches for the lost book of the Spirit Tamers. During the turn-based combat, players can access Shanjanque's spells through the N64's four C buttons, to great visual effect.

Upon first venturing into the game, the smoothness and scope of the graphics is extremely impressive. The animation of the main character is reminiscent of Mario in his 64bit guise, while the scale of environments also draws comparison with *Super Mario 64*. Distant objects are clearly drawn, increasing in detail as players approach, as **Edge** discovered when examining white flecks that eventually revealed themselves to be sheep.

There is a mild reduction in frame rate when the character enters towns and villages, but given the number of structures and other characters on screen at the same time, it's forgivable.

With *Zelda: Ocarina of Time* hitting shop shelves in the same quarter, *Holy Magic Century* could find itself cold shouldered by consumers. Conversely, with gamers' appetites whetted, *Century* may find the market eager for more, and on the early promise shown by the game, that attention should be well deserved.







The variety of NPCs found in the game are diverse and detailed

SHOT

The days are depressingly short and the nights interminably long, but at least Finland has the perfect clime for coding. Edge met resident shoot 'em up technicians Housemarque – a developer with a reputation for pushing technology well beyond the realms of feasibility. Time for a reality check...









The ship's targeting computer can zoom in on distant foes long before they get too close (top). At short range (above) more frenetic blasting is called for

Format:	PC
Publisher:	TBA
Developer:	Housemarque
Release:	TBA
Origin:	Finland

Finland: a land of high living (standards), long (winter) nights and scenery to die for. Literally, in fact, for Scandinavia still claims too many of the world's suicides. Exactly where Housemarque Games (a PC codeshop that admits it's obsessed with getting the best out of embryonic technologies) fits into this landscape is unclear. Maybe such developers in such northerly locations need technology's white heat to keep them warm through the endless winter evenings.

A more plausible clue to Housemarque's techno-lust must lie in *Stardust* and *Elfmania*, the company's early creations for the Amiga. If ever a machine inspired an appetite for the finer things in silicon, it was Commodore's much-missed classic. Once tasted, tomorrow's toys can remain a compulsion for life. And so it is with Housemarque; so while drawing a line before the tide of technology has been made harder by the 3D card revolution, such new cards are just another buzz for Housemarque. And where other developers are drowning (Eidos with *Deathtrap Dungeon* and Blizzard with *StarCraft*, for instance), Housemarque aims to surf the wave.

For its next release, a shoot-'em-up called *Shot*, Housemarque is looking to







The aliens in *Shot* have some unusual skills, including the ability to walk on water (left). The player often has no choice but to kill his own alien allies though, such as when destroying this rig (above)

get the best out of 3Dfx's Voodoo 2 chipset – before most of the world has even glimpsed what it can do. Finished copies of *Shot* probably won't leave the CD plants until 1999, but, even so, making unproven next-generation 3D cards a target system must call for strong nerves.

While this battle to prove a game on unproven technology isn't unfamiliar, the actual storyline to *Shot* remodels another equally ageless scenario: *Shot* is a *Space Invaders* game where, for once, the player sides with the little green men and vents his wrath on the population of Earth. '*Shot* has an epic plot, focusing on several colossal UFOs which crash on Earth,' explains **Jani Penttinen**, *Shot's* Project Manager and senior programmer. 'Each UFO contains thousands of alien colonists. Representing you as an alien fighting against humans opened up seemingly endless new ideas about how the enemy should behave, and it works perfectly as a framework for the game.'

As hinted at by the title, the player takes the role of an alien gunner. With the ship being steered by an autopilot, what remains is a free-firing role in the style of games like *Starblade* and *The Lost World*. More interestingly, *Shot* will give you a full 360 degrees of targeting freedom in every direction, all controlled by the mouse. Concentrating on the delivery of firepower has enabled the developer to create a game of frenetic shooting, its screens bristling with fast-flying opponents. While some might accuse *Shot* of resurrecting the 'on-rails' gameplay of early, best-forgotten CD-ROM titles, its full-firing arc will hopefully fend off any such criticisms.

To get the best out of the gunnery role, Housemarque is rolling out a few extra tricks. For starters, there's an *MDK*-style sniping mode. This enables the gunner to zoom in on the incoming human scum long before they're in range of other weapons, picking off key targets before they get too close. There's also a computer targeting system, which helps focus firepower where it will cause the most damage, and a host of alien allies.

But while Penttinen claims *Shot's* plot is what that Housemarque is most proud of, a glance over the screenshots is what will have most gamers drooling. Gameplay advances are always preferable to new graphical finesse, but improvements in graphics will inevitably excite, provided the gameplay can hold its own. With a realtime polygonal engine optimised for Voodoo , Housemarque is creating a game where shots of free-flowing action could easily be mistaken as pre-rendered scenes.

The texture detail and depth of field is remarkable, but just sticking a new chipset under the bonnet is not sufficient to create effects like these. More graphical power requires new graphics engines. 'Our PhotoSurreal technology enables us to handle scenes consisting of millions of textured, shaded polygons, which was impossible using traditional methods such as *Quake's* BSP-trees,' explains Penttinen. ▶



Most of the game's levels are hit-and-run rescue missions

WITH SHOT, HOUSEMARQUE IS LOOKING TO GET THE BEST OUT OF 3DFX'S VOODOO 2 CHIPSET BEFORE MOST OF THE WORLD HAS EVEN GLIMPSED WHAT IT CAN DO







There are two AI systems running in parallel in *Shot*. The first coordinates enemy units, while the other watches the player's moves in order to learn, facilitating effective counter tactics







Housemarque claims that multipass filtering prevents the 'cold, 3D filtered look'







The 720-polygon 'walker' (top left) boasts a weapon system almost as powerful as that of your own ship. In contrast, human infantry (above right) can offer little response to a surprise attack, and civilian vehicles (above left), none at all

Housemarque has instead created a mesh-compression algorithm that offers real-time detail control. The resulting PhotoSurreal engine promises rarely seen effects, including a variable depth of field and full-scene, realtime motion blur. The latter is a particularly important graphical method that has taken too long to migrate from Hollywood CGI houses to the home PC. More obvious benefits include an average enemy polygon-count of over 500.

Shot will support existing 3D cards, but results will inevitably be less impressive without next-generation 3D chipsets. Housemarque is clearly enamoured with 3Dfx's Voodoo 2: 'From the alpha cards we have tested, Voodoo 2 is clearly the best,' says Penttinen. 'It's very powerful and its dual texturing and complete set of blending modes enable a wide range of cool material effects.'

Many argue sonic improvements are as important as visual advances. Luckily, Housemarque promises a sonic smorgasbord to match the on-screen action. *Shot's* audio subsystem can create new sound channels on demand, ensuring particular sound effects are always played, regardless of how many sources are emitting noises at once. (Most systems cut out sounds once all available channels are occupied.) 'If you can see an object, you can also hear it,' says Penttinen. 'Unless it's behind you!'

Shot's Doppler effects give further examples of sound helping gameplay (rather than squirting from the speakers as an afterthought). Shifting the pitch according to the distance between the object and the player helps in judging the speed of oncoming objects. Implementing the increasingly ubiquitous 3D Sound will also help, enabling more accurate judging of an enemy's position. Sound post-processing adds effects like echoes which vary according to the terrain the player flies over. All these touches show there's more to updating shoot 'em ups than simply giving big bosses a style makeover.

Shot is a glimpse of what PC games will look like in the future – not how they'll play. But its gameplay is certainly more advanced than Housemarque's most recent outing, *The Reap* (**E**54) – basically a cutting-edge *Zaxxon* with new pixel techniques. If its aim with *Shot* is true, the Finnish team could finally achieve the recognition it deserves. Until then, it better stock up on the daylight oil...



'Shot pushes today's PC technology to the very limits,' says Jani Penttinen. 'It would be very hard to make it for consoles'. For example, the walker (above) was made from over 700 polygons and around 20 texture maps











TOCA creator Codemasters has secured the license to build a sequel around the exploits of British rally ace Colin McRae. Edge braved the Wiltshire wilds to find out more...



COLIN McRAE RALLY











One of last year's premier racing games on PC and PlayStation was *TOCA Touring Car Championship*, created by long-standing British developer, Codemasters. Featuring superb handling, *TOCA* was a detailed recreation of the British Touring Car Championship, fulfilling a conceptual promise originally made by Psygnosis' *Formula 1*. At time of press, *TOCA* was still riding high in the UK sales charts, indicating that public appreciation of the game matched **Edge**'s own. So **Edge** visited Codemasters' remote Warwickshire base to examine TOCA's spiritual successor, *Colin McRae Rally*.

After meeting *Rally*'s producer, **Guy Wilday**, **Edge** was given the chance to play through some of *Rally*'s part-finished stages. The (authentic) lack of other cars on-screen takes some adjusting to, particularly following *TOCA*'s packed raceways. However, rallying is all about setting the quickest time between points, and *McRae Rally* is true to its inspiration. Promisingly, the handling of the cars also demonstrates a similar degree of fidelity. Equally notable is the increase in scenery when compared to *TOCA*, along with the facility to adventure off into it following particularly heavy crashes.

To augment *Rally*'s realism, Wilday's team has taken drastic steps, including laser scanning scale models of the actual competition cars, along with sampling both engine and road noise – and McRae himself. Additionally, videos of tracks from around the globe were studied, to ensure that locations from Greece to Indonesia were true to actuality. Play options so far finalised are a two-player mode, along with a novel repair aspect that rewards careful as well as rapid driving. Keen to know more, **Edge** cornered Wilday, switched on the Anglepoise, and began the interrogation...

Edge: What do you feel are the strongest aspects to *McRae Rally*?

Guy Wilday: We've tried very hard on a number of areas. The way the cars handle has been the central element that we've built everything around. The cars slide around a lot – we've tried to get that feel, that ▶

excitement, so it looks like you're Colin McRae haring around in a rally car. So that, mixed with the whole look of the countries, so that you really are immersed in the game. Sections like the English stages, where the trees are really dense, you really do get the feeling that you're there.

Edge: How involved was McRae?

GW: He played it very recently and was very happy with the handling, even playing it on the keyboard. Almost immediately he was sideways going around a corner, which was exactly what we're aiming for – for anyone to be able to pick it up and do that. He was very, very positive about it. He had a good look at the countries as well, because obviously he's driven through them, and again the feedback was that we'd got it right.

Edge: Did any of the development group actually drive a rally car prior to work commencing?

GW: When the project was setting up, the main core of the team went to a rally school and drove 200bhp Sierra Cosworths – which was a lot of fun. The mechanics guy and most of the programming people, the people that were going to have a real impact on the way the game played, they all went and got a good impression of what it's like first-hand. That did a lot, certainly for the handling. It's not ideal, but it's a pretty good introduction.

Edge: Every game has its influences. What 'rivals' did you and the team play during development?

GW: We looked at everything that was around, like *Network Q*, *V-Rally*, *Screamer 2* and *Screamer Rally*, plus all of the PlayStation racers like *Ridge Racer*, and of course now, *Gran Turismo*. Of those it was probably *Screamer Rally* that influenced me the most, just because the handling's so good. It's really satisfying when you get a powerslide going. The racing's really close – if you make a mistake on a corner people go flying past you – it's fun.

Edge: Do you think it's a problem coming into the market after the massive success of *V-Rally*?

GW: I think that it created a lot of awareness, and that people are perhaps looking for rally games on the PlayStation more than they were before. And hopefully, if there is that awareness in the market, then we can make the most of it with our game.

Edge: Gamers obviously see *Colin McRae Rally* as a sister title to *TOCA*. Was there much taken from that game in terms of people and technology?

GW: A few people did shift over. The PlayStation guys are the same, plus the artist who designed the cars, but the rest of the team is fresh, including all the programming people on the team.

Edge: Was much of the *TOCA* 3D engine used?









Careless driving costs... quite a lot actually – as players will discover at the end of stages. Necessary repairs, such as re-attaching bumpers (see above) will deduct valuable minutes from race times

GW: We've taken the engine and tweaked it for what we wanted to do, so we're definitely shifting a lot more polygons than *TOCA* in the landscape. We've tailored it towards that. That's given us the opportunity to do different effects on the cars.

Edge: The PlayStation version has to be able to stand comparison with its accelerated PC sibling. Is *Rally* stretching Sony's machine to its limits?

GW: I think we're getting there. Over the past two years we've seen games get closer and closer to the limit – and things like Sony's performance analyser are just going to help us get there even quicker. It's been difficult to know exactly how well we've been doing up until now, but we can grade stuff ourselves and really get a good idea of how we're doing. I like to think we're using the PlayStation well, and will continue to do that.

Edge: In development terms, is it hard switching between the PC and PlayStation versions?

GW: They're very different formats, and it is difficult trying to come up with a game that's going to show off the features of both. I think with *Rally*, in particular, we've managed to pull that off. Obviously the 3Dfx version looks stunning, but the PlayStation version is in no way disappointing. There's always that gap, but if you can keep it as close as possible without compromising what's being done on the PC – that's the way to go.

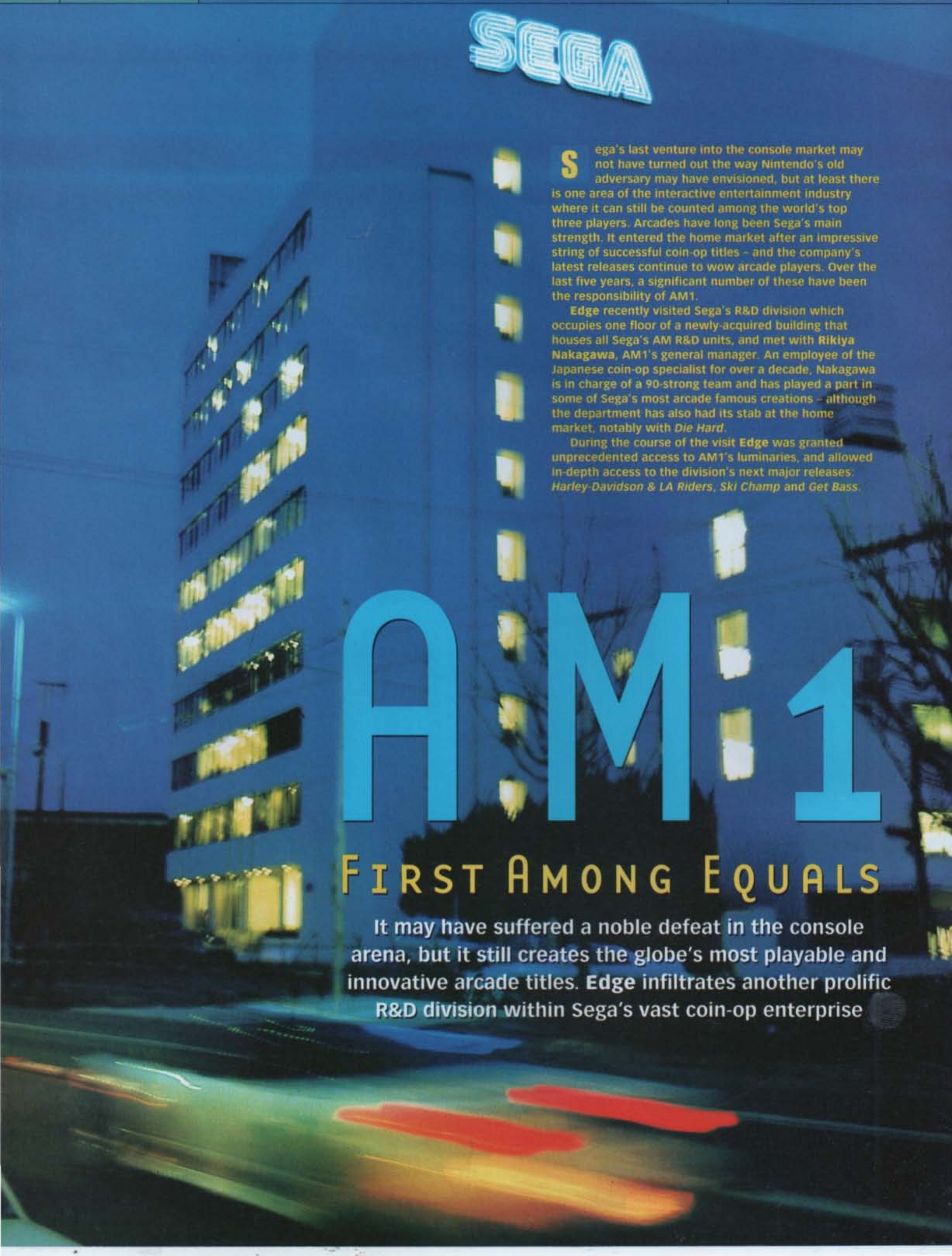
Edge: Given that the version **Edge** has seen was running through 3Dfx on a P300, what's going to be the actual minimum PC spec?

GW: It's early days, but realistically we're looking at something like a P166 with 3Dfx, or a P200 in software. The 3D hardware version is going to be the one to have. We're supporting all of the major chipsets, although it's all D3D – we're not doing anything card specific at the moment. ■





While never likely to match the visual clarity of the accelerated PC version, *McRae Rally* on the PlayStation runs higher-resolution than TOCA and manages to avoid pop-up to a remarkable extent



Sega's last venture into the console market may not have turned out the way Nintendo's old adversary may have envisioned, but at least there is one area of the interactive entertainment industry where it can still be counted among the world's top three players. Arcades have long been Sega's main strength. It entered the home market after an impressive string of successful coin-op titles – and the company's latest releases continue to wow arcade players. Over the last five years, a significant number of these have been the responsibility of AM1.

Edge recently visited Sega's R&D division which occupies one floor of a newly-acquired building that houses all Sega's AM R&D units, and met with **Rikiya Nakagawa**, AM1's general manager. An employee of the Japanese coin-op specialist for over a decade, Nakagawa is in charge of a 90-strong team and has played a part in some of Sega's most arcade famous creations – although the department has also had its stab at the home market, notably with *Die Hard*.

During the course of the visit **Edge** was granted unprecedented access to AM1's luminaries, and allowed in-depth access to the division's next major releases: *Harley-Davidson & LA Riders*, *Ski Champ* and *Get Bass*.

AM1

First Among Equals

It may have suffered a noble defeat in the console arena, but it still creates the globe's most playable and innovative arcade titles. Edge infiltrates another prolific R&D division within Sega's vast coin-op enterprise



Edge: Why did you join Sega?
Rikiya Nakagawa: I started as a programmer 15 years ago. At that time, there were no university programming courses, so I studied electronics but used to program in my spare time. After graduating, I didn't want to make business software, believing instead that computers should be put to more entertaining uses. I had friends at Sega and eventually joined the company. It just seemed like a natural progression.
Edge: What was your first assignment?
RN: At that time there was one department which encompassed both consumer and arcade developments. It was the beginning of the SG-1000 and I did the arcade version of *Choplifter*. I joined Sega in the same year as Yu Suzuki.
Edge: What was the first AM1 game?
RN: It's not that straightforward... The original AM1 split into two different departments, which became AM3 and the present AM1. So, technically, the first AM1 titles were the games from that original department. Since I've been general manager we've made things like *Out-Runners*, for example. There's been a lot of games but I can't recall them all... maybe because they weren't any good [laughs].

Seriously though, things like *Super-Cross*, *Alien 3*, *Sky Target*, *Wave Runner*, *Indy 500* and *The House of the Dead*. We followed those with this year's *Ski Champ*, *Harley-Davidson & LA Riders* and *Get Bass*, but we've also made different ST-V board based games.
Edge: How many games does AM1 make a year?
RN: We've got about ten arcade projects under development at the moment, but we also make horoscope machines, puzzle and print games.
Edge: Your three latest titles run on Sega's Model 3. Is there a significant difference in the development of a title on this board rather than Model 2, for example?
RN: Essentially, Model 3 allows better polygon management, and full colour texture is also possible. This makes generating graphics much easier. Model 2's flat shading became Gouraud shading in Model 3 and there is a greater range of effects, such as transparency – so Model 3 is a far stronger tool for designing realistic games.
Edge: Is the development period longer than that of a Model 2-based title?
RN: Given the same game, the development period on Model 3 would be shorter. But since it allows so many more possibilities we tend to push ourselves further. In theory, better boards, shorten the development time – but as we want to incorporate more special effects than in previous projects, the development period is usually longer.
Edge: The technology that enables you to create the games is improving at a fairly steady rate, but what challenges do you encounter in trying to better your previous efforts?
RN: Some ideas come from the planning department, but we also have regular meetings in which we ask the planning staff to summarise our ideas into a concrete project. However, for *Get Bass* things were different. An AM4 member, who loves fishing, asked us whether we would consider a game based on his favourite hobby. And we did it. We had made *Sports Fishing* previously, which featured a real movie but this guy's idea was to use Model 3 to realise realistic 3D backgrounds, and fish that had lifelike reactions and movements.
Edge: Some people might find the use of Model 3 in a fishing game somewhat excessive. Is the power at the board's disposal really required for such a game?
RN: Yes. Absolutely. To achieve this degree of realism, the power of Model 3 is essential. There's a detailed environment: the line is moving, as is the boat...





AM1's latest Model 3 creations; (from left) the highly enjoyable *Harley-Davidson & LA Riders*, potential genre-leading *Ski Champ*, and the surprisingly playable action fishing title, *Get Bass*

Edge: But do such games sell well?
RN: Yes, *Sports Fishing* sold very well but if you compare it to other coin-op sales figures the result is average. To be fair, *Sports Fishing* wasn't a game – rather a machine that recreated the atmosphere of fishing. *Get Bass*, on the other hand, is a real game.
Edge: What has been AM1's most commercially successful title?
RN: It's got to be *House the Dead*, which is probably the best-selling game of its type.
Edge: What has happened to your ST-V developments?
RN: We continue supporting it and currently have a game in development. Third parties too, are continuing to develop on ST-V.
Edge: You did the arcade and home versions of *Die Hard*. Are you developing *Die Hard 2*?
RN: Yes, but the name has changed. In Japan and the US it will be marketed as *Dynamite Deka 2*, which is its Japanese name. We argued that whether we used the license or not, the game would remain the same. We didn't have any particular trouble with the license, we simply chose not to use it.
Edge: Is the game based on the movie?
RN: It's an original story, although the character from the original appears.
Edge: So how does *Dynamite Deka 2* differ from the first game?
RN: Well, this time we're using Model 2 as opposed to ST-V, so the graphics are substantially improved. There are also more levels, so the game should take longer to complete. Our US office is designing some additional characters who'll appear in the game – it's sometimes difficult for us to develop characters that will be popular in the US. However, the development process is still in its early stages.
Edge: Is this the first time that AM1 has looked outside Japan for support?
RN: That's right. One of our teams, comprising six people, is currently in the US working alongside SOA members, but we do have people here performing some duties too, mainly in terms of character motion.
Edge: With this title being designed for Model 2 rather than Model 3, isn't it a retrogressive step?
RN: At the time the project started, the Model 3 board wasn't ready. Furthermore, we had to take cost into consideration – we want to release a large number of machines at a competitive price, and Model 2 was the most convenient board. We sell lots of machines in the US and they've asked us to keep hardware prices low.
Edge: What kind of games are you planning to develop in the future?
RN: As with the recent *Wave Runner* or *Get Bass*, we want to make games that are accessible to a wide audience, rather than target the Otaku [fanatic] market and release a beat 'em up, for example. We want to get the general public into the arcades.
Edge: Do you favour any specific genres?
RN: I don't have a favourite genre as such – I like everything, really. But I'm fond of games that are amusing rather than violent. ▶

HARLEY-DAVIDSON & LA RIDERS







As in a real city (other than running the risk of being arrested), anything is allowed in order to reach the check point first. That may mean performing U-turns on the freeway, going down one-way streets, riding on pavements or taking any number of shortcuts across pedestrian-infested green areas

As reported in last month's **Edge**, *Harley-Davidson & LA Riders* is AM1's second Model 3-based title, using the second iteration of the board – one already exploited by AM Annex to spectacular effect in *Sega Rally 2*. The game certainly represents a significant departure for Sega, whose racing titles have previously adhered to a more conventional formula.

'We wanted to make a game that allowed players the freedom to roam freely, albeit within the confines of a city environment,' says Nakagawa. 'Up until now there's been too many racing games that restrict the player to a set of predetermined courses.'

Certainly, this free-riding aspect is the game's most immediately obvious deviation from the racing game norm, and should have players immersed within believable LA-esque surroundings as they frantically attempt to reach the randomly-generated time gate before their competitors. But





The game's vehicles are recreated with an impressive level of attention to detail, taken from Harley-Davidson design sketches



For *Harley-Davidson & LA Riders*, Nakagawa was forced to increase the number of his team to 14 members in order to finish it on time



The object of the game is for players to reach a randomly placed check point (above) before any of the other riders manages to get there

despite this latter element, *Harley-Davidson & LA Riders*' fundamental design owes much to Konami's *GTi Club* – except for the obvious fact that *Harley-Davidson & LA Riders* players are missing a pair of wheels.

Nakagawa explains: 'Some of the staff are Harley Davidson fans, but the real motivation for doing it was that we thought riding a bike would be a lot more interesting than driving a car. Also, Harley Davidson has an established brand identity and image that we thought would reflect well on the game.'







The frantic search for the next check point may take riders to some unexpected places (above), although other areas of the city-like play area offer a more normal selection of road users (left)

Cynics may conclude that Sega is cultivating the licence for its strong appeal to the overseas market – especially the US. Nakagawa is adamant that this is not so.

'Of course we have to consider the US market, but Harley Davidson is a bankable name in Japan too. It has a heroic, cinematic, rebellious image, encompassing a quarter-century of movie icons from Dennis Hopper in 'Easy Rider' to Schwarzenegger in 'Terminator 2'.

Once the licence deal had been finalised, the US motorbike company provided *LA Riders*' team (which increased from ten to fourteen people in order to meet the deadlines) with bike designs and a selection of loaned machinery so as to provide the developers with first hand experience of their handling. The team also visited Los Angeles equipped with video cameras, and based the game's backgrounds on footage they brought back.

> 'It has an image that encompasses a quarter century of movie icons from Hopper in Easy Rider to Schwarzenegger in Terminator 2'

However, Nakagawa is quick to point out that the game's gestation period was not without its difficulties, particularly when it came to implementing some of the more complex gameplay aspects.

'It proved very hard to reconcile all the elements we wanted to include – such as authentic areas of LA – with a game design that enabled the player to travel anywhere on a very large map. Players must be able to enjoy the game in any part of the map and get to it from a number of angles. This was particularly difficult. Furthermore, as players are in a town it would have been strange not to include other road users, so we added different vehicles to recreate a lively, cosmopolitan atmosphere.'

Given the reaction from most people at the recent ATEI show (see p10), *Harley-Davidson & LA Riders* deserves to do well when it is released later this year.



Harley-Davidson is world famous and, given the licence, it is unsurprising to find that *LA Riders* features some of the US firm's most famous models, complete with a group of stereotypical riders

SKI CHAMP







The racing environment in *Ski Champ* is highly impressive – and, in keeping with the 'extreme' nature of the title, there is a good variety of danger-filled, unorthodox routes (above)



Another of the AM1 division's research teams has spent the past few months chiselling *Ski Champ* into a form fit to take on the world. Unfortunately, the game was not ready for general consumption in time for the ATEI show and the project is still shrouded in secrecy. Given the competition, the finished product will have to be something special in order to lure the public away from their established favourites.

Nakagawa, however, is confident this latest snow-related adventure is sufficiently nonconformist to ensure commercial success. 'Because of the Model 3 board, the graphics will mark it out from the competition – but we also designed *Ski Champ* to be played in link-up mode, as competition is an important element in the gaming experience.

'Furthermore, the game concept is based on 'extreme' skiing rather than the usual giant slalom approach – players must jump from a helicopter, then thread their way past various mountain hazards as they attempt to reach the bottom. It's a game for hardcore skiers.'

Ironically, one of *Ski Champ*'s primary competitors will be *Super G*, one of Sega's previous winter sports-influenced affairs. Nakagawa is quick to differentiate between the two: '*Super G* was a giant slalom-based concept – Ski Champ takes a different approach. We wanted to make a game where players feel part of the environment, so we've included different realistic events such as avalanches, forest fires and deer. Time isn't the game's most important parameter; as players progress into the game, events become more frequent and dangerous.'

'PLAYERS MUST JUMP FROM A HELICOPTER, THEN THREAD THEIR WAY PAST VARIOUS MOUNTAIN HAZARDS – IT'S A GAME FOR HARDCORE SKIERS'

Still, considering that Japan accounts for 45% of the worldwide snowboard sales – a raw statistic, but one that indicates snowboarding is akin to a national pastime – it may seem odd to opt for a skiing game, rather than play on the flavour of the moment. Nakagawa's explanation is reasonable enough from a developer's standpoint:

'We made another skiing game because we saw the opportunity to realise things we couldn't achieve in *Super G* – chiefly the 'extreme sports' approach.'

Let's hope the public agrees...







Although the skiing arcade market has seen a number of contenders to the winter sports game throne recently, *Ski Champ* is currently looking like the most capable of delivering a truly convincing coin-op experience so far, both in terms of excitement, visual quality and most importantly, sheer playability

GET BASS







Although Sega's AM1 team has understandably simplified the art of fishing for its arcade incarnation, it has concentrated on the animation yet still manages to allow players some form of strategy (above)





Fortunately, impatient, rapidly irritable players will not have to face the prospect of hours of waiting for a fish to take an interest in the lure

Though easily dismissed as a pastime for the socially maladjusted, fishing remains one of the UK's most popular hobbies. It's difficult to predict the impact a fishing game might have in the arcades, but *Get Bass* might just make it among the top-earners in the business, becoming the year's sleeper hit in the process.

Indeed, the first pictures of the cabinet to emerge from Japan caused a ripple of amusement in the **Edge** office, until the team had an opportunity to try out the real thing at Sega's AM headquarters and, more recently, at the ATEI show (in fact, it was whilst at the latter that **Edge**'s respectable catch of a 4.5Kg bass was eclipsed when the next player, a 12 year-old boy, landed a veritable aquatic behemoth weighing 8Kg).

Certainly, *Get Bass* has the graphical clout to compete with any visual extravagance on display in the current crop of racing games, for example, with amazingly lifelike fish swimming amongst equally realistic scenery. Yet the aspect most likely to captivate punters is the playability of AM1's title; *Get Bass* wisely dispenses with the monotonous and seemingly endless periods of non-activity that are a primary attraction of its real-life equivalent. Instead, emphasis is placed on the action-packed moment when the fish bites the lure and fights gamely for its freedom. This results in a highly enjoyable experience as players fight to bring their catch in before the strict time limit runs out.

How much this has to do with the cabinet's use of a force feedback rod and line (which pulls on the player's hands, reacting to the onscreen movements of the fish or warning of the impending tragedy of a snapped line) is open to question. However, **Edge** doesn't hold out much hope for a successful domestic translation of *Get Bass* using only a joystick and buttons.

Originally, *Get Bass* was planned for a Japan-only release, although Sega has since confirmed the game will grace the shores of the UK and the US, the latter housing a significant number of fishing aficionadoes. **Edge** wonders if a line-tangling link-up version is in the works...





According to its developer, once the cabinet is switched on, the fish will grow in size in realtime, making it possible to catch even bigger specimens than the already impressive present stock. The world record stands at a staggering 10.1Kg, and should see virtual fishermen the world over trying to beat it

Characterised by its strategic and corporate idiosyncrasies, the American games industry is a very different beast to its UK equivalent. Edge reveals some of its most significant players

(AMERICA'S ELITE)



AMERICA'S ELITE

[movers and shakers in the American games industry]

While the domestic Japanese videogames market is still held responsible for many of the videogame industry's greatest creative and commercial achievements, the voracious expanses of the North American market still represent the biggest marketplace in the world for videogaming.

Over the following pages **Edge** presents a roll call of the most influential people in the American videogames industry. Some are game creators revered for their design innovations and technical showmanship, while many of the US industry's so-called 'big cheeses' appear here, too. But they are all individuals that make an impact – for better or for worse – encouraging and capitalising on the trends around which the games industry flourishes.

These are people usually hidden from the public eye, spending more time making things happen than posing for the camera or granting interviews to magazines. Enter the heavyweights of the North American videogames industry...

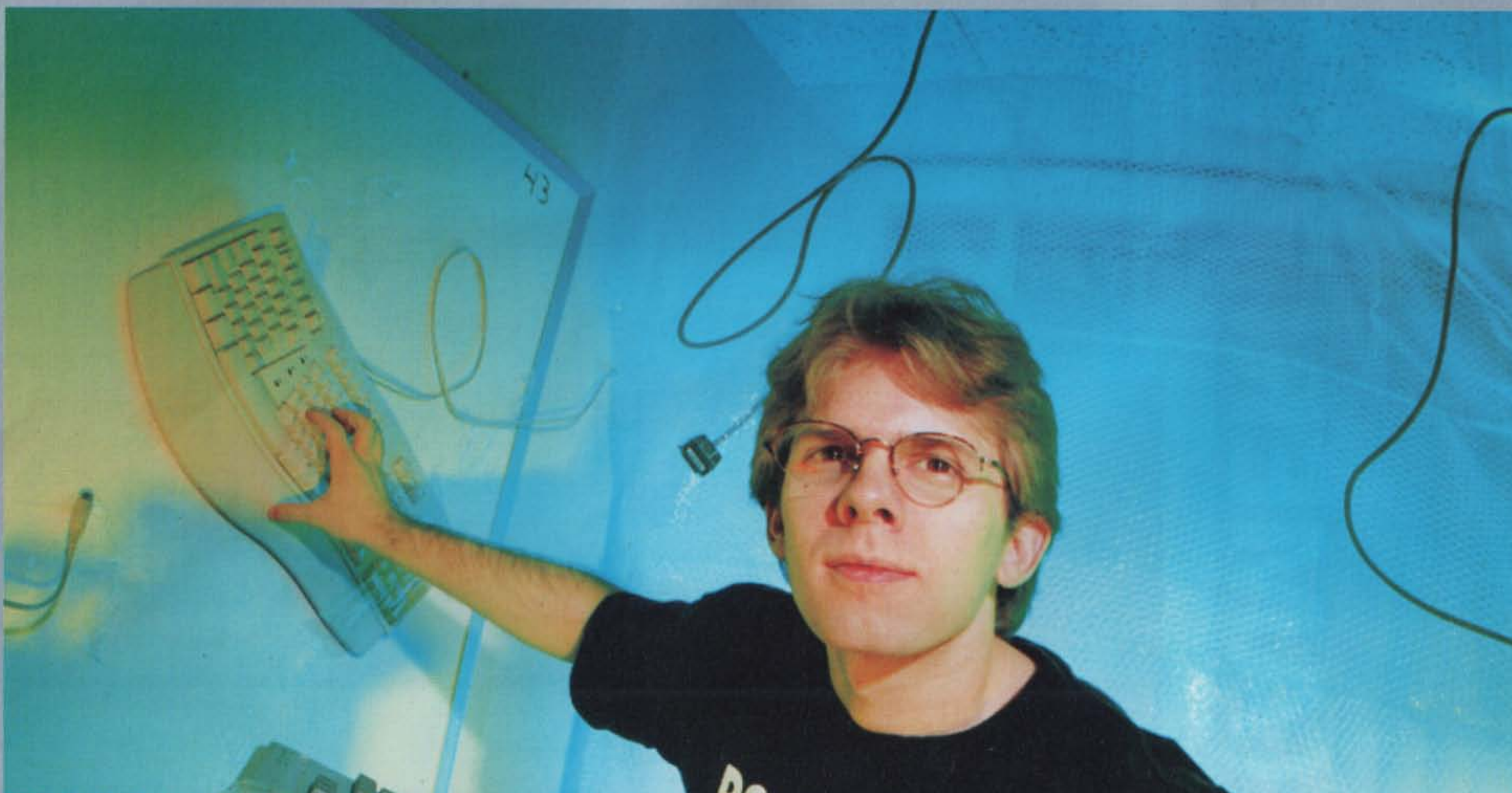
THE LEADER
JOHN CARMACK

Technical Director, id Software

Career highlight: building the engine that created the *Doom* genre **Career lowlight:** *Doom 2*

It is difficult to determine the high point of John Carmack's career: inventing the 3D game genre, creating *Wolfenstein 3D, Doom* or *Quake* – any of these would suffice. A self-described 'technology idealist', it's hard to engage him in conversation until you hit a hot spot – OpenGL versus D3D, for example. Through the success of the *Quake* licensing initiative, his work is actually more important to the industry now, with legions of 'next Carmacks' trying to equal his impact. Expect the decisions he makes on his next project, *Trinity*, to have far-reaching effects on everything from the next generation of 3D cards, to what APIs other developers will be using, to possibly the feature set of Microsoft's future versions of DirectX.

Biggest challenge in 1998: A *Trinity*-based game for Christmas?




YOU HAVE
CHANGE FOR
PARADIGM?



FATHER FIGURE
KEN KUTARAGI

Chairman and CEO, Sony Computer Entertainment America

Career highlight: designing the PlayStation
Career lowlight: The PlayStation as a Super Nintendo add-on

Ken Kutaragi led the effort to create a CD-ROM add-on for Super Nintendo. When Nintendo killed that effort, he looked five years ahead, decided 3D was the future, and while his contemporaries at Sega, Atari and 3DO were creating great sprite engines, he built what was, at the time, the most powerful low-cost 3D generator on the planet.

Since then, he has moved on to management (while still keeping an interested eye on, and some say hand in, development), taking control of SCEA. It's a post that puts him second only to Terry Tokunaka, head of SCEI in Tokyo. The added responsibility hasn't hurt his good nature, though – when he saw his test photos, he insisted on changing the entire arrangement of the shoot. Why? 'These pictures look too serious!'

Biggest challenge in 1998: Keeping people believing in PlayStation as cutting-edge technology after four years



UP CLOSE AND PERSONAL

PHIL HARRISON

VP of third-party relations and R&D, Sony Computer Entertainment America

Career highlight: Approved *Final Fantasy VII*
Career lowlight: Approved *Fantastic Four*

After a stellar rise at SCE Europe, Harrison (who's only 27) was appointed as Kutaragi's right-hand man at SCEA. It wasn't luck that put him there: Harrison is articulate and intelligent, and has a keen eye for the future. (He's also adept at dodging questions he doesn't want to answer – on the record, at least.)

Ultimately, he's responsible for the contents of every game released for PlayStation in the US. Whether it's a new set of programming libraries from Japan on its way to US developers or final code for a third-party game, it all passes across Harrison's desk.

Biggest challenge in 1998: Convincing third parties to continue developing for PlayStation as more powerful systems appear on the horizon









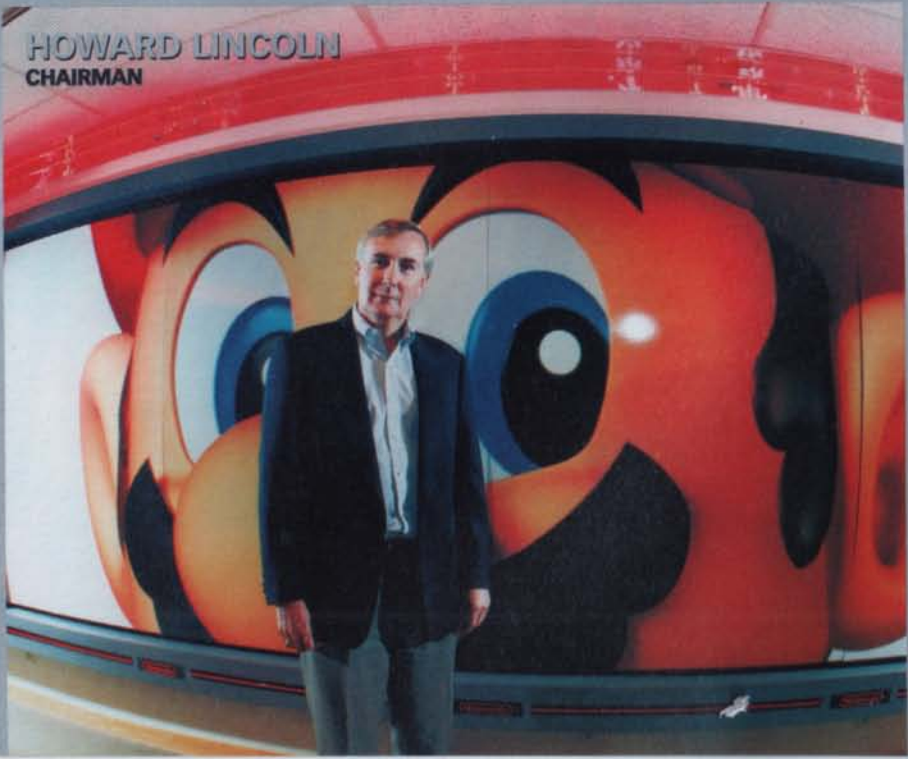
POWER TRIO
NINTENDO OF AMERICA

Career highlight: Made Nintendo 64 a success in the US
Career lowlight: Failed to stop Virtual Boy

Howard Lincoln, Minoru Arakawa and Peter Main have done in the US what Nintendo has failed to do in Japan and Europe – make Nintendo 64 an unqualified success. While the post-launch months were poor, the system now boasts a small yet solid library of four- and five-star games (with the fighting and sports genres as notable exceptions).

With the Nintendo 64 benefiting from a combination of quality first-party titles and marketing carefully targeted at 12-year-olds, it's not surprising that this is the same team that saved the US videogame industry in 1985 with the NES. Nintendo has a well-deserved reputation as a conservative company, but in person, Lincoln, Main and Arakawa are not the stuffed suits one might expect. Presented with a pack of Nintendo playing cards (the company is still Japan's leading producer of both Western and traditional hanafuda cards), they quickly got into a raucous game of five-card stud.

Biggest challenge in 1998: Releasing decent 3D fighters and sports titles on Nintendo 64



WORLD-BUILDER
RICHARD GARRIOT

Senior VP and executive producer, Origin

Career highlight: the *Ultima* series, excluding *Ultima VIII*
Career lowlight: *Ultima VIII*

Origin's tag line is 'We create worlds.' A more accurate description might be 'Richard Garriot creates worlds, and then we publish them.' Garriot wrote *Ultima* in BASIC; now *Ultima Online* is the most ambitious (if flawed) online project yet.

Betweifhese two projects, the *Ultima* series has embraced almost every gameplay and technological innovation possible. Although many others have contributed to the series' success, the final arbiter of all things British is Garriot. He even goes so far as to place himself in his games as the character Lord British (and was actually assassinated during the beta test of *Ultima Online*).

Biggest challenge in 1998: Making everyone forget about *Ultima VIII* with *Ultima IX*; getting the malcontents on *Ultima Online* to stop whining (good luck)







STRATEGIC PLANNING

SID MEIER

Director of Creative Development, Firaxis

Career highlight: *Civilisation*
Career lowlight: we're stumped; *Floyd of the Jungle*?

From *Civilisation* to *Gettysburg*, Sid Meier has long been America's most impressive home-grown design talent. His dedication to making the games he wants to make has consistently resulted in the highest-quality, intellectually challenging games. *Gettysburg* is the perfect example.

Based on his fascination with the battlefield diagrams in a children's book, *Gettysburg* makes the most of a limited concept through flawless design and execution. Meier, thankfully, shows no desire to move to the corporate side of things – Firaxis was founded as his vehicle to develop games without interference while others (EA) handled everything else. It's good to know that someone is challenging the standard notion of what a videogame should, or worse, has to be.

Biggest challenge in 1998: Excelling himself, again

RECONSTRUCTION

BERNARD STOLAR

Chief Operating Officer, Sega of America

Career highlight: Securing *Mortal Kombat 3* as an exclusive for the PlayStation (this is America, remember)
Career lowlight: The Saturn comeback

As head of third-party relations at Sony, Stolar was instrumental in securing exclusive software support for the PlayStation. His defection to Sega sent major waves through the industry, but the planned revitalization of the Saturn never happened. With almost no third-party support left for Saturn and only a few Sega titles slated for 1998, Stolar's current workload is focused on building developer support for the Katana platform. At this point, bringing Sega back from the brink could take a superhuman effort – but that's exactly the kind of thing for which Stolar has become known.

Biggest challenge in 1998: Garnering enough third-party support for Katana to ensure it fares better than Saturn







THE DIRECT APPROACH
KEVIN DALLAS

Group Product Manager, DirectX, Microsoft

Career highlight: DirectX 5.0
Career lowlight: DirectX 3.0

For years the PC development community has longed for a stable and reliable suite of APIs for Windows machines. With the release of DirectX 5.0 last August, Kevin Dallas and the DirectX team at Microsoft have finally largely delivered on their promise of a high-performance, easy-to-use API set. Having been on the DirectX project for more than a year, Dallas has seen the company through the development and release of DirectX 3.0 and now 5.0 (Microsoft opted not to create a version 4.0). And while the process that took the project from DirectX 1.0 through to 5.0 has been a long and sometimes painful one, both Microsoft and developers seem to agree that the results were worth the wait.

Biggest challenge in 1998: Making DirectX work with Windows 98, while continuing the expected improvements

HIGH ROLLER
BRETT SPERRY

President, Westwood Studios

Career highlight: *Command & Conquer*
Career lowlight: Sold Westwood to Virgin too soon and for too little money

Vegas-based Westwood Studios gave birth to the realtime strategy genre with *Dune II* and took it to the next level with *Command & Conquer*. Sperry's latest gift to gamers? *Blade Runner*, which proves that Westwood is continuing its quest to push gameplay and technology to new heights. Expect other industry players to keep looking to Sperry for creative direction – whether they admit to it or not.

Biggest challenge in 1998: Keeping Westwood Studios intact no matter what happens to Virgin Interactive, the parent company currently surrounded by rumours of a takeover





THE OPERATOR
BYRON COOK

President, Midway Entertainment



Career highlight: *Mortal Kombat*
Career lowlight: *Mortal Kombat*

Cook's father Leland began his career as a vending route operator, later founding the arcade outfit Leland Corp, which merged with Tradewest in the mid-'80s. It was Williams/Midway's acquisition of these companies that brought Byron into the WMS fold. And now, even in the face of declining arcade revenues, Midway Home Entertainment (which was spun out of WMS) and subsidiary Atari Games have produced some decent titles of late – *Armageddon* (p110) chief among them. A native Texan, Cook walks and talks with with a swagger. By all accounts, this is also the way he runs his business – maybe that's why Midway is the only major US player left in the cutthroat arcade business.

Biggest challenge in 1998: Maintaining Midway and Atari's recent arcade success

GETTING TO KNOW YOU

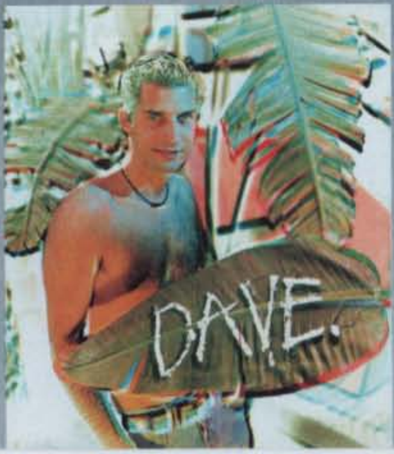
DAVE PERRY

President, Shiny Entertainment

Career highlight: *Earthworm Jim*
Career lowlight: Shiny's continuing inability to ship *Wild 9s*

What, Dave Perry in **Edge** again? Yes, and not just because he agreed to take off his shirt for the shoot. Let's just say he likes people to know who he is. His shameless self-promotion might be more irritating if he wasn't right so often about gameplay and technological developments. After a massively successful stint at Virgin creating side-scrollers, he founded Shiny, created *Earthworm Jim* (with Doug Tennapel, now of the Neverhood), and got enticed by the management and licensing side of the business – to the detriment of his teams' success. The *MDK* team's departure to form Planet Moon may have been a wake-up call: Perry's taking a renewed interest in development, and Shiny's newest projects, *Messiah*, *Fly by Wire* (both in **E**50) and the still well-shrouded *Sacrifice*, look invincible.

Biggest challenges in 1998: Getting *Wild 9s* out the door; convincing Brian Fargo to release *Fly by Wire*



IN THE GAME
LARRY PROBST

Chairman and CEO, Electronic Arts

Career highlight: Establishing the strongest brand names in gaming (EA Sports, Origin, Bullfrog, Maxis)
Career lowlight: *Madden '96* not shipping

Many assumed that EA's best days were over when Trip Hawkins left for 3DO. Under Larry Probst, however, the company has continued to excel in the two things it has always done well – pioneering new strategies, then exploiting them better than its competitors. The first to publish games developed out-of-house, it was also the first to acquire other companies without assimilating them. This strategy has paid off: the independence given to Bullfrog and Origin has resulted in games that have earned critical and financial success.

Biggest challenge in 1998: Keeping EA Sports' current implosion from permanently damaging the brand's reputation for quality





BIG BUSINESS
RON CHAIMOWITZ

President and CEO, GT Interactive

Career highlight: *Doom, Quake, Duke Nukem* acquisitions
Career lowlight: *Bug Riders*

The man responsible for launching the careers of Gloria Estefan and Julio Iglesias at CBS Records now heads everything from distribution to product development at GT. At a time when most companies are pulling back from wild growth patterns, GT Interactive seems determined to dominate the ranks of publishing superpowers – a feat well within its reach. GT Interactive was spawned from Good Times Video, the company responsible for everything from releasing Hollywood classics on video to Richard Simmons' series of exercise tapes. Under Chaimowitz's direction, GT can attribute its success to two things – powerful distribution channels into mass-market retailers (thanks to the video business) and high-profile product acquisitions like *Doom, Duke Nukem* and *Quake*.

Biggest challenge in 1998: Filling the hole left by id leaving for Activision





RAFAEL FUCHS







Israeli-born Fuchs studied photography in Jerusalem before moving to New York in 1985. He has photographed many American celebrities and corporate figures, including actors Eric Stoltz and Nathan Lane, talk show hosts Larry King and Ricki Lake, and Colin Powell, former chairman of the Joint Chiefs of Staff. His work has appeared in publications such as Newsweek, Time and Esquire.

SPECIAL FX
GREG BALLARD

President and CEO, 3Dfx

Career highlight: making Voodoo an industry standard bearer
Career lowlight: greenlighted Capcom's *Fox Hunt*

In any list of the nicest people in the game industry, Ballard would be near the top. His ability to drive a hard bargain among friends has served 3Dfx well: he's convinced developers, board makers, investors and consumers alike to buy into the idea of 3Dfx-enhanced games. Despite a software-heavy CV (with previous stints at Capcom USA and Digital Pictures), he's thrived in the cut-throat world of 3D accelerators.

Biggest challenge in 1998: keep Voodoo2 three or four steps ahead of rivals





TO THE RESCUE
BOBBY KOTICK

Chairman and CEO, Activision

Career highlight: Saving Activision
Career lowlight: Giving Bruce Willis company stock to appear in *Apocalypse*

Bobby Kotick and his team saved Activision from bankruptcy in 1991. And while the road back to prosperity for the original third-party developer hasn't been without a few bumps on the way, the company has produced a steady stream of hits, *MechWarrior*, *I-76* and *Dark Reign* among them. The company is a bit shaky on the console side, with the much-hyped Bruce Willis vehicle *Apocalypse* rumoured to be on indefinite hold, but Kotick still believes strongly in moving the industry forward, as the forthcoming *Battlezone* demonstrates. This idealism makes Activision a company to watch in both the action and adventure genres.

Biggest challenge in 1998: Making fewer big promises and more good games

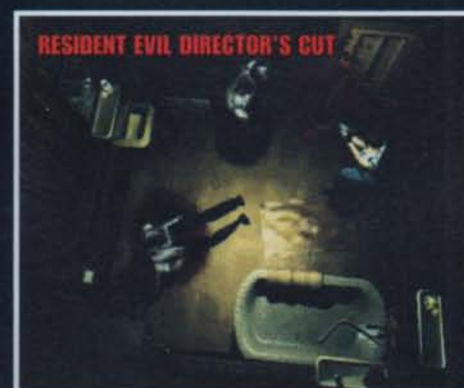


EVIL EMPIRE

RESIDENT EVIL WAS UNLEASHED IN EARLY 1996, AND THE MUCH-DERIDED INTERACTIVE MOVIE WAS DULY REBORN. SINCE THEN, A MUCH-HYPED SEQUEL HAS CAUSED GLOBAL HYSTERIA IN THE US AND JAPAN, REALISING A INTERNATIONAL GAMING PHENOMENON. ENTER CAPCOM'S TERRIFYINGLY LUCRATIVE WORLD OF 'SURVIVAL HORROR'...







Blood-splattered gore (above), hideous creatures (top right) and avant-garde camera angles (right) combine to give the *Resident Evil* series an evocative horror film atmosphere

Last month, while James Cameron's epic 'Titanic' was confounding pundits' expectations by refusing to sink, a certain videogame was making an equally international impact of its own. On the release of *Biohazard 2* – sequel to the 1996 PlayStation adventure – shops in Tokyo opened two hours early on January 29 to cope with unprecedented queues and allegedly shifted a staggering 1.8 million copies in the first day alone. Over in the US, where the game appeared a week before its Japanese equivalent, it shifted more than 380,000 units in the opening weekend, eclipsing the success of *Final Fantasy VII*, *Tomb Raider 2* and even *Super Mario 64*.

However, to purloin another 'Titanic' analogy, this is just the tip of the iceberg. In a press release issued late last year, Capcom announced that the *Resident Evil* franchise has generated revenues of over $200m worldwide – a drop in the ocean for James Cameron, but a massive success story for the videogame industry, a comparatively obscure corner of the entertainment world.

What's more, the series is proving highly attractive to third party investors. Constantin Films of Germany has acquired the film rights, and a script – closely following the storyline of the original game – is being given a final polish by Alan McElroy, who worked on last year's effects-laden 'Spawn'. Meanwhile, toy company Toy Biz is creating a line of action figures based around the first game, which are due to hit the shops in Spring (*Resident Evil 2* figures are set to follow in the Autumn). No doubt such parent-unfriendly toys will come with detachable rotting limbs and realistically putrid innards.

Finally, a comic book series based on *Resident Evil* is also in production. The quarterly series, due to begin in March, is being produced in the States by Wildstorm productions, previously responsible for 'Wildcats' and GEN 13'. According to Capcom, the opening issue will reveal the background of Umbrella – the shadowy science research organisation at the centre of the *Resident Evil* storyline. No doubt a *Resident Evil Experience* ride in London's Trocadero is just around the corner.

'THE WORLD OF SURVIVAL HORROR'

In the midst of all this success, those who have yet to play the original, the sequel, or indeed *Resident Evil: Director's Cut* (which shifted a creditable 400,000 copies last year) may well be wondering what all the fuss is about. Arcade adventures are rife in the contemporary videogame market place, and Capcom's use of pre-rendered scenery rather than true 3D environments seems positively archaic in the wake of *Tomb Raider*.

However, when *Resident Evil* premiered two years ago ▶







***The Biohazard* – aka *Resident Evil* – series has sold millions of copies**







Japanese 'survival horror' fans queued for hours to pick up a copy of *Biohazard 2* on release day

the game was a revelation. At that time the 32bit market had become reliant upon coin-op conversions to excite would-be consumers, and very few games were aiming to challenge players' brains as well as their reflexes. By offering an adventure element and a plethora of fiendish puzzles to compliment the zombie-blasting action, Capcom snared the attention of gamers alienated by the monotony of beat 'em ups and racing titles.

The visuals, too, were hugely impressive for the time. Blending polygon models with rendered backdrops was a science in its infancy when *Resident Evil* was being developed, and rarely has the technique been employed to such convincing and compelling effect. In both titles, the scenery is used not just as eye candy, but as a fully interactive element of the game: zombies lurch from behind shelves and within wardrobes, hounds smash through windows and monsters burst unexpectedly through solid walls. All of which create a frighteningly unpredictable world for the player to explore.

Regardless of technical merits however, the sheer detail and sense of place in both the games is spectacular. Bloody hand prints smear the walls; huge pools of blood leak from floored zombies; paintings, furniture, and everyday objects litter the rooms. This minutiae increases the atmosphere ten-fold.

'THEY ENTERED THE MANSION, WHERE THEY THOUGHT THEY WOULD BE SAFE...YET...'

Perhaps the main reason for the success of *Resident Evil*, however, is its excellent understanding and implementation of horror movie conventions – especially the entertainment value of shock. Few players have forgotten the first time those two hounds smash through the windows in the original title, and gamers are equally unlikely to forget the swooping crows, or the zombie plummeting through the ceiling, in the sequel. The laughable acting only amplifies the horror movie motif.

And there are many more elements borrowed from cinema. The skewed camera angles used throughout the games are a stock weapon for film directors who wish to disorientate the audience (the technique was popularised by Hitchcock but has its roots in German Expressionist cinema), while the wilting, ebbing soundtrack featured in both is vintage horror movie stuff, perfectly accentuating the eerie atmosphere. Cut scenes, too, crop up again and again in Capcom's series and these create tension in a very cinematic way. The ceiling descending on Jill's head in *Resident Evil*, for example, is a classic suspense moment – and the player, like a film audience, watches helplessly, wondering how the heroine is going to escape.

Capcom's designers skilfully manipulate players in order to create an atmosphere of suspense and mystery. Information about Umbrella and its experiments is revealed in minute snapshots, and the player is never quite sure who is on their side. What the hell IS Barry up to in *Resident Evil*? And is the girl in the sequel about to warp out into a zombie at any minute? However, unlike in, say, *Quake*, the player can't just shoot at anything that moves. As in the best horror films, ammo is always limited and saving that one last shotgun shell may mean the difference between blasting a zombie in half, or getting an enthusiastic love bite in the neck...





The cast list of both *Resident Evil* and its sequel are set to appear as toy figures in the United States

AN INTERVIEW WITH HIDEKI KAMIYA

Speculation over the origin and development of Resident Evil has raged ever since the game was released two years ago. To find out more about the history of the title and its excellent sequel, Edge spoke to Hideki Kamiya – chief director on Resident Evil 2 – about Doom clones, '70s zombie films and a certain French PC adventure...



Edge: What were your main sources of inspiration for *Resident Evil*? *Alone in the Dark*?

Hideki Kamiya: Personally, I've never played *Alone*, so I can't can't really compare the games, but I remember seeing one of the team playing it when were designing *Resident Evil*. Actually, though, the original concept came from a SNES adventure game called *Sweet Home* which was released in December '89 in Japan. We also studied all the famous horror films like '*Zombie: Dawn of the Dead*' as a reference for the monsters in the game, and our artists watched lots of American films before starting on *Resident Evil 2* to get some good ideas for back street scenes. Basically though, most of our team are film fans, so I think you'll see the influence of various films while playing the games.

Edge: What were your main aims when you began designing the original game?

HK: Our main desire was to examine the theme of 'fear', because we thought it hadn't been sufficiently explored in games before. Our aim was to utilise the PlayStation's graphical capabilities to convey as realistically as possible this sense of fear, which is part of human instinct. In the early stages of development, the game was going to be played in a firstperson perspective, like Doom, but we couldn't achieve a satisfactory graphical quality by doing it that way. Consequently, we changed the style of the game so that we could use more realistic CG rendered backgrounds, and more polygons in the characters. This is how the thirdperson style developed.

Edge: Did you make any alterations to the *Resident Evil* formula for the sequel, and if so were you happy with the results?

HK: We are basically satisfied with the way *Resident Evil 2* turned out. The main reason why the original game was so successful is that it aroused a very realistic feeling of fear, so we have been very careful not to lose that in the sequel. However, I think *Resident Evil 2* is different in that it is not so horror orientated – we added more of an action film atmosphere because we felt this would be the most obvious way to broaden the audience, and it is simply closer to my own taste. I'm not saying there are no horror scenes, but we have tried to find other ways of conveying horror without resorting to cut sequences.

Edge: How did the development of *Resident Evil 2* differ from that of *Resident Evil*?

HK: Well the process went very smoothly, because all the staff except the sound team were working on the same floor this time. When we were working on the original title, the graphics team and programming team were on different floors, so any differences of opinion escalated into some very loud and heated discussions which irritated everyone else in the building!

Edge: Why do you think the series has been so successful?

HK: I think the biggest reason is that everyone in the team really enjoyed working on *Resident Evil 2*. Although we had a tough schedule, we never lost the good relationship we had as a team, or the one essential desire which drove us: to create something brilliant.

Edge: What's next for *Resident Evil*? Is there going to be another sequel?

HK: The series will certainly continue. There are many things I want to do with it, but I'll wait to hear the opinions of those who play *Resident Evil 2*, to make sure as many people as possible are satisfied with the next one.

Edge: Finally, judging by Capcom's output in the past, should we expect *StreetFighter Vs Biohazard* to appear soon?!

HK: What?! Ryu vs Leon? I'd love to play that!







Early designs for *Resident Evil 2* reveal horror is still paramount

HOW TO SPEND $1.2M IN 30 SECONDS

Capcom Japan recently employed horror director George A. Romero to create a *Biohazard 2* TV ad (**E**54) based on scenes from the game. The two-day shoot, which cost an incredible ¥150,000,000 ($1.2 million) took place in and around an old jailhouse. Outside, burning police cars, stumbling zombies and plenty of dry ice perfectly recreated the moment Leon and Claire enter Raccoon city and find devastation everywhere.

Capcom also produced a short 'Making Of...' documentary which was shown on Japanese TV recently. In it, Romero discusses the filming of the ad, while the hilarious 'actors' playing Claire and Leon 'get into character' and talk about their roles (which last all of four seconds). Taking the whole thing remarkably seriously, Romero states, 'I loved making the movies and it's great that there is a game which is like a flashback to that genre. I feel that maybe I had some sort of influence on it, which is flattering'.



1



2





3



4



George A. Romero (top) directed the lavish *RE2* TV ad (above, right)

BAD INFLUENCES

When Resident Evil was released in 1996, many gamers wondered how a company previously renowned for its repertoire of scrolling shooters and 2D beat 'em ups should suddenly come up with the idea for an innovative horror adventure. On playing the game, however, Capcom's main inspirations and influences are clear to see...

ALONE IN THE DARK

Although *Resident Evil* was the first arcade adventure to make any impact on the PlayStation, the game – regardless of Capcom's claims – did not herald the start of a whole new genre. Way back in 1993, French developer Infogrames released the first part of its famed *Alone in the Dark* trilogy on the PC (see page 107), a horror-based action adventure which mixed polygon characters with detailed pre-rendered backgrounds. Sounds familiar.

But the similarities with *Resident Evil* don't end there – despite Kamiya's insistence that Capcom's team were not influenced by the seminal French title. **Frederic Raynal**, designer of the latter, told **Edge**, '*Resident Evil* is definitely inspired by *AITD*. It's an adventure game, you're in a house infested by zombies, you control an animated 3D character; even some puzzles and scenes are the same (pushing the big clock, dogs jumping though windows, etc). There are too many similarities for it to be a coincidence. In fact when I saw *Resident Evil*, I was proud of what could be done with my idea with today's technology. But I was very upset when I read an article in which the creators of *Resident Evil* explained they had the idea! What a cruel world!'



ZOMBIE MOVIES

By commissioning Romero to create the *Resident Evil 2* TV advert, Capcom was no doubt acknowledging a debt to perhaps the greatest influence on the original game: the director's 'Living Dead trilogy'.

Most obviously, of course, there are the zombies themselves. In 'Night of the Living Dead', 'Dawn of the Dead' and 'Day of the Dead', these putrefying creatures shuffle about, arms out stretched, emitting low moaning noises – a haunting image, especially in the numbers usually presented toward the end of the films. The virus victims in *Resident Evil* exhibit the same ponderous movement and eerie groans, and the fear induced by these seemingly unstoppable, mindless cannibals is as great in the games as it is in the seminal horror flicks.

But *Resident Evil* has borrowed even more widely from Romero and zombie cinema in general. The theme of desperate survivors defending themselves against waves of undead aggressors while trying to discover the source of the attack is a recurrent one in the film genre and provides a solid basis for the storyline in *Resident Evil*. Romero in particular made use of seemingly benign locations like shopping malls and TV studios to place the action in a believable context, thereby drawing viewers deeper into the experience. The *Resident Evil* series replicates this with a beautiful mansion, police station, picturesque gardens, and so on.

Neither can the gore factor be overlooked. Romero was famous for using real animal viscera during the mass cannibalism scenes in his films, and rarely would ten minutes go by without a throat being ripped out or a gaping zombie stomach spilling yards of steaming intestines. *Resident Evil* boasts zombie heads being kicked off, shotgun blasts which send gushes of blood across the room and all manner of hideous monsters capable of tearing STARS officers limb from limb. Perhaps the most important lesson Capcom's designers learned from Romero, then, was don't use a pint of blood when a couple of gallons will usually suffice...









It wasn't just Romero's 'Living Dead' films (top row) which inspired the *Resident Evil* designers. Bringing corpses to life through scientific research and medical mishaps – the plot which runs through Capcom's series – is a common zombie film theme. In Vincent Dawn's 'Zombie Creeping Flesh', for example, a chemical leak in Papua New Guinea turns the whole population into cannibal zombies, while Lucio Fulci's 'Zombie Flesh Eaters' revolves around an English scientist trying to combat a zombifying disease in the Caribbean. The genre reached its zenith of popularity in the 60s and 70s when nuclear war paranoia fuelled a morbid interest in the effects of radiation and secret government-sanctioned medical experimentation.

testscreen

The definitive monthly assessment of the world's latest videogames

GAMEVIEW

DMA's **Brian Baglow** finds the little flaws in *Crash Bandicoot 2* just too much to bear



Brian Baglow is the communications manager at DMA Design, the Scottish codeshop responsible for *Lemmings*, *Grand Theft Auto*, and, most recently, *Silicon Valley* (see page 42)

Members of the development community should email submissions to **edge@futurenet.co.uk**

Crash Bandicoot 2

I must have missed the meeting where we decided platform games were no longer hip. 'Unless they're 3D, they suck. Sorry babe!' (That's how journalists and PR people talk, you know.)

Does the following ring any bells? 'Its derivative and often unoriginal gameplay make it a title that is frowned upon at first...' Yes, *Crash Bandicoot 2* has had a kicking in the press. And guess what? I'm going to give it one, too.

Actually, I've got a few reasonable complaints about *Crash 2*, rather than just being worried what my hipster friends think. It's not Crash himself who I have a problem with. He's a top bloke. Any night out with him will end up with throwing bits of kebab at each other, laughing hysterically and shouting at girls waiting for a taxi. And it's not the art. Crash himself is gorgeous, the other characters are beautifully twisted, the animation superb and the cut scenes work nicely. The controls are good, too. Crash is easy to manage and his new moves fit in really well with the overall flow of the game. So what's the problem?

They're little things, but they're important in a platform game. Collision for one. There are levels in the game where Crash gets to ride a baby polar bear through perilous canyons, jumping and tumbling through all manner of nasty obstacles. Which is nice. But when you slam to a complete halt, splattered against, well, thin air, Crash having snagged a stray fingernail on a looming, icy statue, you do get a bit upset. Then there are the 'Oops! I've died' levels, where the player ends up throwing away lives in order to learn the layout of the level. You do get a lot of lives, but dying simply to discover a pit, an electric fence and a few mines (ouch!) is a real bummer. In the realms of deadly game sins, it's almost as bad as getting shot by something off-screen.

Crash 2 is so very harsh over minor things. Jump on a sinking platform while it's only ankle deep in water and poor Crash drowns. Platforms crumble from under him and the slightest touch of anything unfriendly means Crash has had it.

That's it; nothing huge, but these things happen on every single level. Despite gorgeous graphics, intuitive controls and cunning level design, I was left feeling that if *Naughty Dog* had been a little more critical during testing, *Crash 2* could have the classic I was hoping for.







More refined graphics, an improved level-select system and a host of hard-to-find areas are not enough to prevent DMA Design's Brian Baglow feeling disenamoured with *Crash Bandicoot 2*

VIDEOGAMES ON THE EDGE

The games – old, new, whatever – that have grabbed **Edge**'s attention this month



Resident Evil 2 (PlayStation)

Capcom's terrifying, hugely atmospheric, suspense-filled horrorfest maintains the superb immersive quality of its predecessor and has kept the magazine on edge since its arrival



R-Types (PlayStation)

Arriving just a tad too late to be reviewed this issue, Irem's shoot 'em up bundle oozes class. The first game alone is worth the asking price, its sublime gameplay still standing proud today



Gran Turismo (PlayStation)

Edge hasn't tired of buying and tuning up vehicles, approaching corners at ridiculously dangerous speeds and powersliding the hell out of Sony's astounding racing title



HD & LA Riders (Arcade)

One of the most enjoyable new coin-ops at the recent ATEI show, Sega's version may be a thinly disguised *GTi Club* with bikes, yet proved highly playable in fourplayer link-up mode

Index

Resident Evil 2







Creatures stumbling near any of the fire sources in the game will ignite, but luckily you won't (above). The sheer quantity of enemies in *Resident Evil 2* can feel overwhelming, particularly when running desperately short of ammo













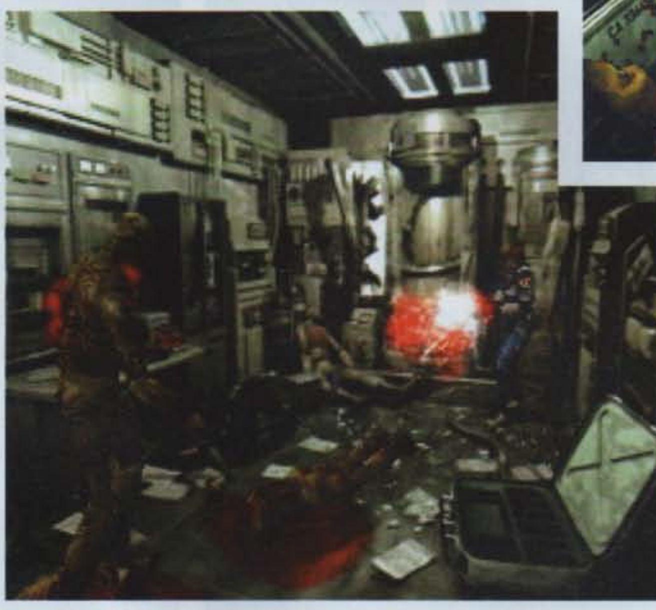
The game is packed with exceptionally high quality, realtime cut scenes that help tell a very convincing story (right, above right)

Format: **PlayStation** Publisher: **Capcom** Developer: **In-house** Release: **Out now (USA/Japan) May/June (UK)**






Just like the original, you only know a monster's really dead (as opposed to undead) when the tell-tale pool of blood starts seeping out from the corpse (above)



There are some fantastic new weapons to be found in *Resident Evil 2* including a sub-machine gun, a flamethrower and a taser. These new heavy weapons require two inventory slots to carry and have a limited lifespan






The CGI intro is one of the best Edge has seen. Rookie Leon and partner, Claire, discover that Raccoon city is 'infested with zombies' (no surprise there, then) . The truck sequence, in particular, is stunningly animated

For a machine as pervasive as the PlayStation, it's a shame that the truly seminal titles can still be counted on the fingers of one hand: *Gran Turismo*, *Tekken*, *Tomb Raider*, *Resident Evil* and (for more acquired tastes, perhaps) *Final Fantasy VII*. These are the titles to die for, the instant classics that have proved that Sony's machine is more than a popular cultural icon, but also a machine for hardcore gamers.

New arrival *Gran Turismo* is obviously too young to have been superseded by a slicker model, but most of the others have been treated to well thought-out, intelligent sequels that have largely improved on the originals, though all have been careful not to dilute the original recipe for success. The list now includes *Resident Evil*.

Those that have rejected the childish nature of Nintendo's releases in favour of the PlayStation's more mature library, will find comfort in Capcom's long-awaited sequel. It's adult in concept (it has a 17+ rating in the US), intelligent in execution, and above all, frighteningly good.

The events of the sequel follow on from the original. Some time has passed since the original outbreak of the T-virus that transformed the occupants of a secluded country house into a horde of mindless zombies. Now the infection has spread to the nearest town – Raccoon City – and it's your job (wouldn't you just know it) to get to the bottom of the mystery, and just as importantly, to escape alive with the knowledge.

RE2 is, as you would hope, a major advance on the original both technically and in terms of storyline. For a start, the backgrounds have been immeasurably improved – there's a new richness of detail that immediately attracts the eye. There are more monsters too, up to five appearing on-screen at one time, giving the early moments of the game a more frantic feeling than anything in the original, as you attempt to gun your way through massed ranks of townspeople-turned-flesh-eaters.

Thankfully there has also been a dramatic improvement in the loading times of the various scenes. There's still a perceptible pause every time you move to a new area, and the familiar opening-door device is still used to cover the sucking of data from the disc. Just enough time, however, has been shaved off to prevent it becoming as tiresome as it did in the original.

But the single biggest step forward is the vastly improved plot. Conversations between various characters in the original would tend to leave you more confused about what was going on than you were before. The set pieces that now occasionally interupt the player in *RE2* do so much more fluently, and they add to the drama of the unfolding events rather than detracting from them. While *Resident Evil's* dialogue included some of the most badly delivered lines ever heard in a videogame, the sequel has a script that – while not exactly Shakespeare – isn't far short of something like the X-Files.

And the script is really crucial to *Resident Evil 2*, because this is a videogame that's more akin to a movie than almost anything else that's been attempted. Much has already been made of the influence of film director George Romero's work on the first game, not just in terms of content, but also in the fields of lighting and camera- ▶









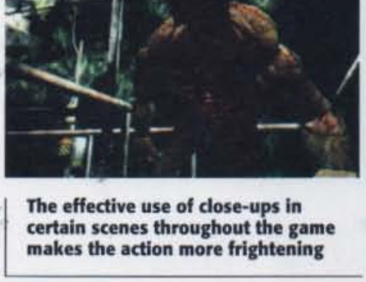
Some of the scenes make obvious cultural references to horror classics such as 'Aliens' (above) and 'Poltergeist' (right)



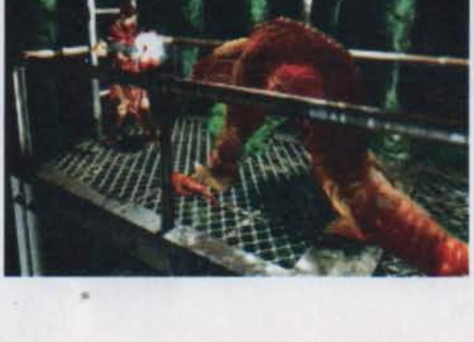


The spiders are back (above right) and this time they hunt in packs. The little girl in the sailor suit with Claire is a pivotal character in the game and sometimes you get to play her, too. A huge mutating vine (above left)

work and the subsequent atmosphere that's created. And it's not stretching things too far to say that whereas *Resident Evil* paid homage to his 1969 masterpiece, 'Night Of The Living Dead', *Resident Evil 2* owes more to that film's 1979 sequel, 'Dawn Of The Dead' in that it attempts to take the same strands of plot and weave them into a broader background. *Resident Evil*, like 'Night Of The Living Dead', was essentially a one-act play with just the one set – a house in the country. *Resident Evil 2*, on the other hand, attempts to broaden things by placing the action across a much wider arena and boasts four seperate, distinct locations, making the actual game area bigger, and benefiting from more camera angles, too.



The effective use of close-ups in certain scenes throughout the game makes the action more frightening



As in the original, *Resident Evil 2* offers you two characters; one male and one female. This time around, however, instead of choosing between two elite cops, you have to play both characters to completely finish the game – each character occupying its own CD. First up is Leon, the rookie cop, and only when the game has been finished with him does the player get to swap discs and play Claire, the girl who's come to town to look for her brother. Both characters play essentially the same levels, although Claire does get access to some new areas denied to Leon and the puzzles are moved around. The weaponry available to the two is different as well. A neat twist means that Leon's progress through the game affects Claire's. If Leon picks up some equipment, he denies it to Claire later on, and there's one puzzle right at the end of the game that requires both characters to have acted in a certain way – but solving it is not crucial to finishing the game.

There are also many more characters populating the world of *RE2* – there are other survivors to find and interact with. Cleverly, you also get the opportunity to play some of these characters at points when progress for the main two becomes impossible. When Leon is knocked unconscious, for instance, the player suddenly and rather unexpectedly gets control of a mysterious woman. Then at a cliff-hanging moment it's suddenly back into Leon's body as he groggily wakes up. Little moments like these – as was the case in the *Alone in the Dark* series – make the









This character (above left) keeps cropping up throughout the second segment. He seems to be Claire's personal bogeyman and while you can put him down for a bit, you can't kill him. Run and hide is the best plan



After Leon is injured at a crucial point, he gets bandaged. Details like this make the game much more absorbing to play

game much more enjoyable; the unexpected pepping up of what might otherwise have become repetitive.

The puzzles in the game are all fairly straightforward, and if there's anything to criticise it's that players of the first game will find some of them a bit too familiar. As before, though, the puzzles are really devices to open up new areas and keep the player on-track through the storyline – the vast majority of them involve obtaining and using keys of some kind or another. The enjoyment of the game comes more from the atmosphere and story than from the conventional videogame techniques of trial and reward.

The game environment deserves a mention too. Apart from *Goldeneye* and *Tomb Raider*, it's hard to think of another game that so convincingly transports the player, through the glass TV screen and into the body of the onscreen character. The scary moments – and there are quite a few – are made even more frightening by the involvement you have with your character, and more notably, the feeling you have of 'being there'.

This is largely due to *RE2's* totally convincing 3D. Even though it's not possible to reach them or see them, all the parts of a room are fully-mapped in the PlayStation's memory. This can be tested by firing the bow gun, one of Claire's weapons that simultaneously launches three crossbow bolts in slightly different directions. By listening to the three impacts and the way they change as you point in different directions, a map of the area can be built up with all the corners and curves that are never seen, but which are there nonetheless.

The aural authenticity doesn't stop at sound effects, though. Superbly eerie chip-generated music accompanies the onscreen antics in remarkable fashion and serves as a way of severely heightening the tension further still.

Equally convincing are the monsters. Usually these will be heard before they're seen and it doesn't take long before to differentiate between them from the noises they make. But it's when they lumber or skitter or leap into view that the full impact hits home. These monsters are horrible, convincing creatures that make the blood run cold and the heart beat faster. It's quite possible for the player to be gripped by sheer panic when jumped, as often happens, vitally delaying reactions.

The biggest compliment that can be paid to *Resident Evil 2* (and its precursor) is that, in the two years that have passed since the original's release, not a single title has even come close to matching it. And this will probably hold true for its absorbing, frightening and sumptuously detailed follow-up – a sequel that clearly points the way towards a future where games and films aren't mutually exclusive entities. So it's official, the 'interactive movie' is no longer something to snigger about...

Edge rating:

Nine out of ten





The controllable girl, Sherry, may have no weapons, but she's small enough to dodge most creatures

Fighters Destiny



While special moves are accompanied by an impressive display of graphical pyrotechnics, normal punches and kicks light up the fighters with little flashes of red at the point of contact. Powerful attacks can see the whole fighter flash red, giving the game a slightly retro, yet satisfactory, feel





While the apparent standoff between Nintendo, Capcom and Namco continues, N64 gamers have waited for the machine's first classic beat 'em up with a growing sense of desperation. There are now as many N64 fighters as any other game style, but the titles on offer range from the insultingly poor (*Mortal Kombat Trilogy* and *Dual Heroes*) to the just about adequate (*Mace: The Dark Age*). *Fighters Destiny*, formerly *Fighting Cup*, is the first title to make a serious fist of upholding the N64's honour.

Based on a novel points scoring system to decide bouts, the game uses the N64 controller's D-Pad to control a range of 10 polygon-generated fighters (though more become available later). Button controls are in the familiar punch, kick, block set-up, allowing more complex moves to be built up via swiftly-tapped D-Pad and button combinations. Characters are unarmed, and the majority of the game's moves are derived from the *Virtua Fighter* school. However, hidden within the game – in a range of ever harder combinations – are the kind of pyrotechnics more reminiscent of *Street Fighter*.

BOUTS TAKE PLACE ON RAISED PLATFORMS, **FROM WHICH CHARACTERS ON THE VERGE OF A RING OUT CAN HANG** AND SOMETIMES SCRAMBLE BACK ONTO



Players will need to perfect some of the game's more advanced moves before achieving a Knock Down

The stand-out feature in *Fighters Destiny*, however, is its points system. Seven points are needed to win a bout, requiring as many separate encounters as it takes to reach that score. Knocking an opponent down earns three points, throws earn two, a successful special move can notch up four, while countering (reversing) a special earns three. Significantly, the two great beat 'em up stand-bys – ring outs and power-bar-to-zero knock outs – earn only a single point. Players quickly learn that a good knowledge of the more complicated moves is the only real way to progress in the game; all-out button thrashing wins low-scoring ring-outs, but gives the opposition plenty of time to come back with a match winning Special or Knockdown.

A host of unique touches also mark out the game as something special. Bouts take place on raised platforms, from which characters on the verge of a ring out can hang and sometimes scramble back on to. One brilliant technique can enable a dangling player to reach out and



***Fighters Destiny* encourages players to gradually learn the moves rather than simply pound buttons**

Format: **N64** Publisher: **Ocean** Developer: **Imagineer** Price: **£60** Release: **Out now**







Grapples on the edge of the arena can be a battle of wits. Using the sidestep button, a cunning gamer can throw an advancing opponent off and out



***Fighters Destiny* offers plenty of replay incentive. As well as a couple of hidden characters, the game has a number of different play modes that should ensure players keep coming back**

grasp the ankles of his opponent, pulling him to the ground. The game also includes a pleasing variety of throws which the victim can resist with a frantic tapping of the block button. During this sequence, the game view changes seamlessly to give both players a perfect view of proceedings. The satisfaction of activating power moves is augmented by the spectacularly realised special effects that accompanies them; Imagineer has set the visual standard that others will have to beat.

While *Fighters Destiny* is clearly the best beat 'em up available on the N64, it is not without its shortcomings. Control is somehow not as fluid or as immediate as a *Tekken* or *Street Fighter* game. The D-Pad on most N64 pads are sorely under-used, and certainly stiffer than their Saturn and PlayStation counterparts. However, the game's slight sluggishness to respond to movement commands can't really be put down to this, or the unfamiliarity of a game based on anything other than the analogue stick. Because beat 'em ups are such simple games, their success or failure often comes down to almost infinitessimal differences in programming. *Fighters Destiny* shows that Imagineer has much to learn from the likes of Sega, Namco and Capcom.

Though moves between characters are nicely differentiated, **Edge** would also question whether there is the sheer number to keep a beat 'em up expert fully satisfied. Games like *Virtua Fighter 2* have set high expectations for the number of attacking options open to the gamer, and although, superficially, *Fighters Destiny* seems to satisfy – characters do look and fight in genuinely different styles – true beat 'em up aficionados may soon find little new to discover after prolonged play.

Namco and Capcom will find little in *Fighters Destiny* to prompt any emergency board meetings, but they should take note. The wait for the perfect N64 beat 'em up continues (and will do until Nintendo makes one itself or coerces a trusted third party into doing so), but this is the bravest and most innovative attempt yet.

Edge rating:

Eight out of ten



Character animation is the best yet seen on the N64 but still not as great as we might have expected





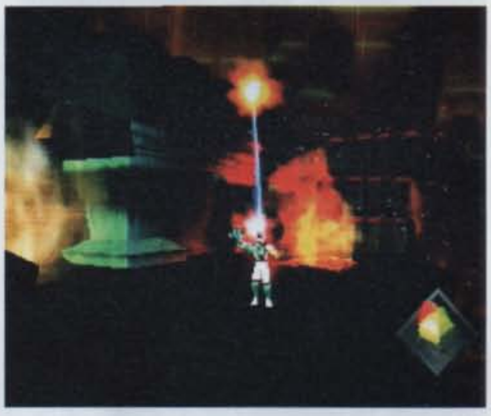
Character design takes a turn for the unusual with the introduction of a Pierrot-style clown as one of the main characters and a strangley bi-pedal cow as a bonus. Edge fears for the sanity of the game's developers

One

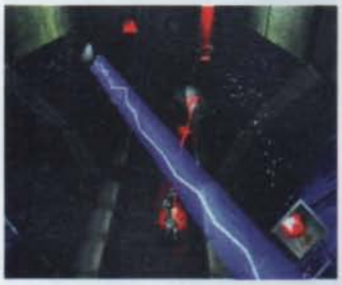


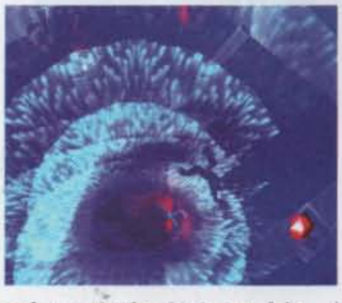






Get ready for full-on action: *One* is crammed with non-stop blasting and blazing, all the way to its conclusion. Unfortunately the game's sub-structure can't quite stand up to the pressure, failing to offer a substantial enclosure for the endless explosions. And of those, there are very, very many...





Make no mistake; this is one of the most visually rich and rewarding PlayStation games so far seen

Strangely absent from developers' release schedules for the last couple of years, the low-tech, high-adrenaline shoot 'em up is making a quiet comeback. Easily chief among these fresh faces is Squaresoft's sublime *Einhänder* (eight out of ten, **E**54), which delivered fresh credibility for the space-based facet of the genre. The second such title to arrive is *One* from ASC (US distributors of DMA's *Grand Theft Auto*), featuring the run and shoot adventures of John Cain.

In line with every second PlayStation title of the moment, *One* hangs haphazardly around a futuristic plot. Protagonist Cain has awoken in unfamiliar surroundings, burdened with the twin troubles of a missing memory and a missing right arm. However, his absent limb is replaced by a high-powered laser, essential equipment to wreak revenge on his enemies. It would seem the imagination of ASC's development team knows a few too many bounds...

Action commences immediately, with the player guiding Cain in a madcap dash down a long gangway, constantly under fire from a gunship. As with all sections of *One*, this initial stage is viewed in the third-person, and could easily demand definition as an 'interactive movie'. With missiles crashing through windows, loudspeaker-battering explosions, and masses of debris falling around the character, the theme for the remainder of the game is clearly set.

Each of *One's* successive locations offers a new type of graphic inventiveness. For the mountain stage, ASC's artists have shaded the cliff faces from white up to a rocky-brown via a hint of purple, an effect **Edge** cannot recollect noticing in other titles. It's one of the best visual



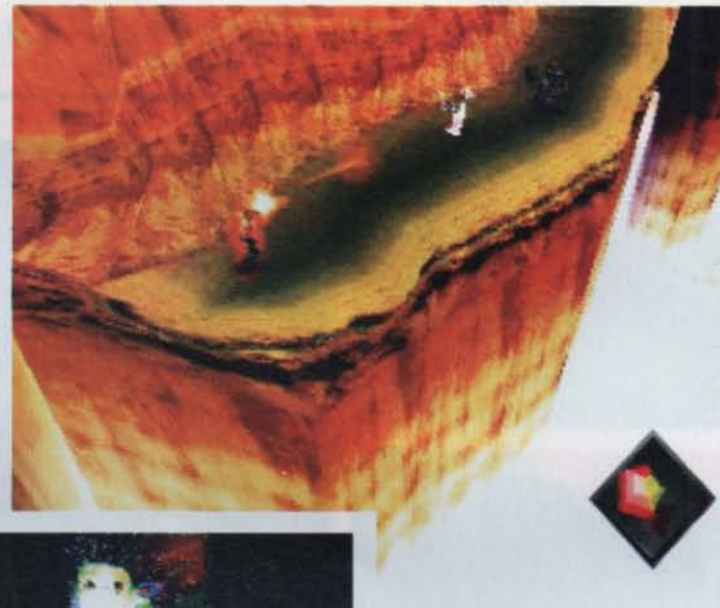
In this section, Cain must kick these undersea creatures from the glass to prevent implosion

aspects to the game, and certainly conveys a greater sense of depth than a simple fade to black. *One's* second level is equally stunning – graphically – with a rooftop battle that routes from open spaces to precarious ledges. This is the stage that has perhaps the most rewarding design, due to the close integration of graphics with the gameplay. Unfortunately, it's also where *One's* most serious flaw tears through the action.

Creating a solid, controllable jumping movement in three-dimensional platform titles has been a recurring

Format: **Playstation** Publisher: **ASC** Developer: **In-house** Price: **£45** Release: **Out now**





Leaping between skyscrapers is complicated by occasional incoming missiles. Larger gaps must be bridged by destroying billboards before moving on (top)





The mountain section (main) is particularly striking, although the camera tends to wander away from the great-looking canyon. Other areas clearly owe something to the movie *Blade Runner*

problem for developers. ASC has been unable to avoid this curse, and *One* suffers particularly heavily. The game's loose character positioning is merely annoying in early stages, when the result is only to set-back progress. However, as soon as missing a platform ends in the loss of a life, *One* frustrates to the point of disdain. The stages that are limited in the number of such jumps are both more enjoyable and more suited to the style of the game. For *One* is all about blowing things to pieces, and when the gameplay focuses on that, the experience is remarkably involving.

One's strongest aspect is the novel connection made between Cain's health and weapon strength. Shoot 'em ups have always been about expanding the available armoury's content and power, a facet which ASC has integrated in its game. Cain begins combat armed with a slow-firing, green hued laser, the potency of which is represented by a small rotating ball in the corner of the screen. The more damage to enemies and environment Cain chalks-up, the more powerful and rapid his blaster becomes, while taking hits reduces both. It's a nice touch, which ends with a flourish, as the maximum weapon strength converts the character's secondary punch attack into a devastating explosive blast.

After the smoke has settled, however, (yes, there is a 'however'), *One* doesn't quite click with the player in the way other classics of the genre such as *Green Beret* and *Contra* did. The intriguing depth of structure suggested by the first stage soon fades away, which is a great shame, leaving the player to face multitudes of suspiciously similar foes in familiar fire-power encounters. ASC's game is plenty of fun in a transient, eye-candy fashion but ultimately, it's not special enough to deserve **Edge**'s recommendation.

Edge rating:

Six out of ten







***One* features a couple of nice bonus weapons, such as the all-engulfing flame thrower (far left). The standard laser is also pretty effective**

Ultimate Race Pro





Originally born as a bundled demo for VideoLogic's Power VR card, *URP* also supports 3Dfx (screenshots shown)



***URP*'s fogging effects are used mainly to depict weather, although 'pop-up' is cloaked in this way**



Now is not a good time for racing games to arrive in the **Edge** office, the decks still awash in *Gran Turismo*'s wake. Complete in almost every way, Sony's racer has set a new, hard standard against which newcomers to the genre must be measured. Kalisto's *Ultimate Race Pro*, originally a one-track showcase for the Power VR card (with which it was bundled), is now a fully-fledged app, ready to stand on its own terms.

Designed from the ground up to run accelerated, *URP* is jam-packed with all the features expected from such games. Gouraud-shaded, realtime lit, z-buffered, anti-aliased; the list is a comprehensive combination of 'next-generation' addenda. The player can decide which of these graphical treats best suits their needs, with a bar meter displaying the impact of the selected options upon the frame rate. Running on **Edge**'s P266 through 3Dfx with all options enabled, but drawn in letterbox format, *URP* slips along at a silky 40fps. Make no mistake, visually this game is approaching coin-op territory, although brief moments of frame drop-out (in places where the screen is packed), serve to remind that this is a PC game and not an arcade board. It is possible to run *URP* in software, of course, but sadly it's a desperately low-fi experience. And it's worth noting that the 3Dfx version's colours are less vibrant than those generated by Power VR, but this, it seems, is a standard difference between the cards.

Leaving aside its graphic accomplishments, *Ultimate Race Pro* pleases and disappoints in equal measure. The good news is that Kalisto has succeeded in imbuing its game with a credible handling model, although the cars are tail-happy in the extreme. It says much about this title that a handbrake key is included – and must be used for successful navigation of the 18 courses (16 standard plus a training circuit and a multiplayer arena). However, such slip-sliding antics have resulted in innovative track designs that regularly twist and turn through 180 degrees, making them stand out from those of other games.



Strangely, all of *URP*'s cars can be customised to suit the players needs, making the preset settings redundant



Format: **PC** Publisher: **Microprose** Developer: **Kalisto** Price: **£30** Release: **Out now**







Whatever else, *Ultimate Race Pro* hammers along at a fair rate, sounding the death knell for unaccelerated games once and for all. Grappling with the oversteer-prone handling will prove a challenge for even the most experienced racing game fan; scenes as above are commonplace

In more general terms, the conception of the courses lacks the imagination displayed in Sega's *Daytona USA* – a title which *URP* struggles to ape. With locations ranging from the expected (through a city's streets, replete with underpasses), to the downright dull (nondescript countryside), Kalisto has done its game a disservice. Fortunately, the actual layout of the tracks rescues it slightly, helped to no small degree by its technical showmanship. Also of note are the weather and daylight effects deployed on selected stages, with the fade from day to night, and from wet to dry admirably executed. At least in pure numeric terms *URP*'s sixteen courses are comparable to its contempories, although several of these are repeated – either at night or reversed.

Edge's most serious reservations, though, are with the apparent lack of consideration given to the game's structure. *URP*'s testbed roots push up through the freshly laid tarmac of its new tracks, tripping it at every step. Simple reward systems are totally absent from the game. Winning a race merely results in a 'Congratulations you came 1st' message; *URP* shuns familiar notions such as extra cars or tracks – to its detriment. The multiplayer network game is reasonable fun, but only features a single arena with a few token power-ups. Ultimately though, the game is crippled by its inferior AI; computer controlled opponents tour around the tracks in single file, offering little in the way of interaction. On these terms, *Gran Turismo* leaves *URP* stalled on the starting grid.

Kalisto has done so much right with *URP*, in particular the handling and visual aspects, that it's a shame that so little thought has gone into turning what was essentially a great demo into a credible title. On the PC it may not have much in the way of competition, but there are still gaping holes in *Ultimate Race Pro* that could have been filled by another few months in development.

Edge rating:

Six out of ten





The transition from day into night is subtly handled, something which cannot be said of the headlight effect





Back on its VideoLogic home turf, *Ultimate Race Pro* benefits from sharper colours (above). Track layout is fine; environment design is not. The multiplayer arena is sufficiently complex to stand repeated play (right)

Ore Tomba





Although not particularly complex or challenging, *Tomba's* platform sections make up the main bulk of the game. Neat design and typically bizarre Japanese humour help the game from becoming a chore







The game's RPG element means having to go back and forth through levels and using the correct items

There can be few who doubt the PlayStation is now the rightful heir to the SNES crown. It has a market penetration that includes as many non-gamers as fans, and a seemingly never-ending stream of titles unhampered by the anticipation that now unfortunately accompanies Nintendo 64 games. And it's precisely titles like *Tomba*, from the delightfully named developer Whoopee Camp, that proves the PlayStation's mainstream appeal.

Tomba's heritage lies in dozens of Super Famicom platformers from Hudson's *PC Kid* through Namco's *Xandra's Big Adventure* passing Data East's *Joe and Mac* along the way. At its heart is 2D platforming, pure and simple, but add a rousing cartoon intro (courtesy of CD storage space), some typical Japanese lunacy, plus a sprinkling of lightweight RPG characterisation, and the whole package comes together just like it did so many times during Nintendo's 16bit heyday.

Like Namco's recent *Klonoa*, *Tomba* has also been looking at western titles like *Pandemonium* and its pseudo- 3D solution to advance the platform game. But **Edge** isn't convinced of its merits. While the game's backgrounds – a mix of real-time and pre-rendered polygons – give *Tomba* that contemporary glossy 3D sheen, and it's spiky, pink-haired, protagonist can at times move in and out of the screen, the majority of the action is firmly rooted in the left and right, swing and hit, camp. It's easy to suspect that Whoopee Camp have only included these nods to the third dimension because they feel it's expected of them. If they could have got away with it, *Tomba* would have worked just as well with a few layers of parallax scrolling and a couple of fancy sprites standing in for the cut-scenes.

Likewise, although its designers have tried to invent a new method for *Tomba* to dispatch the game's various enemies – a belly flop onto their back followed by a somersault throw – it frequently falls back on the old, traditional, projectile weapons, as if unconvinced that their new ideas really work that well.

Looking objectively, there's little to stop *Tomba!* quickly drowning in the sea of current PlayStation releases. As a straightforward platformer, it's simply no better or worse than many of its 16bit predecessors. But those who seek it out and appreciate its quirky Japanese charms, can feel safe in the knowledge that five years on, they'll be able to smugly cite it as a classic example of old-school platforming. Especially when no-one else has a clue what game they're talking about.

Edge rating:

Six out of ten





It may look more exciting but it's far easier to take out the enemy pigs with a well thrown boomerang

Format: **Playstation** Publisher: **Whoopee Camp** Developer: **In-house** Price: **¥5,800 (£30)**
Release: **Out now (Jap)**

Warhammer: **Dark Omen**



This year's *Warhammer* opponents are the Greenskins: unsightly and barbaric hordes of Orcs and Goblins who are complemented at all-too-frequent intervals by the Undead – a dodgily animated bunch of stiffs





The maps can be rotated in case you want to see behind a bush and you can zoom in to see ye olde sprites in all their gory detail

With its Tolkein-esque livery and strong licensing ties to table-top wargaming, *Dark Omen* provides the missing link between hardcore strategy games and *Warcraft 2*-style scrummaging.

Combat occurs in real-time, but is highly formalised in respect to the medieval nature of the conflict. Units are strictly organised into regimental blocks, which must be carefully orchestrated during the set-piece battles as they are meant to see the player through an entire campaign. Aprés-battle the player collects a mercenary fee for his efforts which can be blown on replenishing troops, hiring new regiments and upgrading.

Each scenario is delicately balanced so that the player is rarely more than an errant click from disaster. Unfortunately this is a knife edge that grates. Pyrrhic victories are all too common, preventing progress in the campaign and forcing extended replay of each battle in the search for acceptable losses. Moreover, the heavily scripted nature of each encounter, with enemies faithfully appearing at the same points, breeds over-familiarity.

Frustration rapidly follows as a counter-intuitive interface hampers your efforts to proceed. Though a grand improvement over the original *Warhammer* game, *Dark Omen* eschews the established custom of keyboard shortcuts for orders in favour of dragging the player through the point and click interface every time. It also rejects the notion that anyone may wish to set their own mouse sensitivity or redefine the awkward key layout controlling the 3D map rotation. Fighting the interface as well as the enemy regularly leaves the player lagging behind current events which, allied to non-existant unit AI, often means your own units will happily bombard each other till you arrive to clean up the mess.

It is unfortunate that *Dark Omen* is blighted by such medieval failings because it resonates with many good ideas. The enemy mix is eclectic and resourceful, unleashing surprises deep into the game. Graphically, too, the map makers have demonstrated their imagination and skill, although rarely do your units have an opportunity to take tactical advantage of the much-vaunted 3D terrain. The story line is strong and portentous, though not as portentous as *Dark Omen's* tragic flaws.

Edge rating:

Six out of ten





The cluster of icons in the bottom right allow for charging, shooting, retreating and the discharge of magical weapons

Format: **PC** Publisher: **Electronic Arts** Developer: **In-house** Price: **£40** Release: **Out now**

testscreen round up

Nagano Winter Olympics '98

Edge must admit to holding some hope of this version being superior to that of the N64, as the two versions were programmed by different teams within Konami. But sadly the reverse is true, with this PlayStation interpretation proving to be more disappointing than its predecessor.

There are some improvements, however, the graphics displaying a crisper quality than its N64 cousin. Unfortunately, the characters turn out to be less controllable, with some events, such as the bobsleigh, appearing to refuse to obey the player's instructions. Furthermore, the collision detection, particularly during the downhill events, doesn't appear to be the most refined example yet seen in a videogame.

In essence, the flaws of the N64 version are still present: there is little diversity in the nature of the events, the several control methods somehow lack unity, and the whole thing sits uncomfortably somewhere between a sim and an arcade experience.

Utimately, then, the result remains regrettably unengaging.

Edge rating:

Five out of ten





Format: **PlayStation** Publisher: **Konami** Developer: **In-house** Price: **£40** Release: **Out now**

Soukyu Gurentai Oubushustugeki

Somehow, despite the fact that 3D is now almost universally considered an essential game element, the trusty old 2D shoot 'em up has retained its magnetic hold over the Japanese gamer's consciousness. In many ways, the genre is reaching stagnation point, but *Soukyu* does at least offer a few new angles.

Most obvious concessions to the '90s are visual. The beautifully lit backgrounds are littered with impressive 3D features (the skyscrapers looming beneath the action at the beginning of the game are particularly good), and there are some great weapon effects. In gameplay terms, the title features an excellent laser-targeting system which scans the screen for enemy craft and then lets rip with missiles when the fire button is released. What's more, the player gets to choose from four different craft at the beginning of the adventure, providing a little variety.

However, at times this is shoot' em up action at its most derivative. End-of-level spaceships that shoot out massive rays of blue light, and asteroid fields where the player has to navigate between massive boulders as well as avoid enemy fire are just two of the clichés that Data East employs. It represents a compulsive blast for shoot 'em up connoisseurs, but anyone else should probably stay away.

Edge rating:

Five out of ten





Format: **Playstation** Publisher: **SCEI** Developer: **Data East** Price: **¥9,800 (£50)** Release: **Out now (Japan)**

F-22 Raptor

Although Lockheed Martin only recently started manufacturing F-22s, the PC already boasts a capable simulation. NovaLogic's newcomer, *Raptor*, might not have the depth of DiD's *Air Dominance Fighter* (awarded 9/10 in **Edge** 52) but for this very reason, many gamers will find it the easier F-22 to enjoy.

Flying the F-22 is straightforward. The fighter's radar-resistant design means it would actually crash into the ground without constant computerised assistance. In effect, even real pilots control a largely simulated airplane. But *F-22 Raptor* scores further points for simplicity with its sequential mission structure and hassle-free gameplay. By contrast, DiD immerses the player in a bustling virtual battlefield. It's wonderful but, without a sufficient investment of time, bewildering. Gamers should decide what sort of game they're after before choosing their sim.

Sadly, in comparison with DiD's game, *Raptor* also falls slightly short graphically. Almost unforgivably, its 3D engine actually precludes hardware acceleration. On lower-spec machines without accelerators, *Raptor* could possibly be the better option, but it's *F-22 ADF* which exploits the full potential of a state-of-the-art PC.

NovaLogic has created a fine simulation in *F-22 Raptor*. It just hasn't created the best.

Edge rating:

Eight out of ten







Format: **PC** Publisher: **NovaLogic** Developer: **In-house** Price: **£40** Release: **Out now**

Skull Monkeys

Skull Monkeys is the first PlayStation title to emerge from DreamWorks Interactive. Before going it alone, several members of the team had previously worked on Shiny's acclaimed *Earthworm Jim* for the 16bit machines. That certainly explains the similarities between the two games.

Skull Monkeys is a member of the platform game 'old school'. It warrants its 32bit tag, however, in the use of stop-motion modelling for the main characters and backdrops. The animation team's hand can be seen as the large cast of *Skull Monkey* species and platform-based hazards are scrolled on screen. Every aspect of the levels and characters is beautifully handled, and the speed of gameplay is enough to make Interplay's *Clay Fighter* team weep.

Despite the graphical prowess, in terms of gameplay advances there is little difference between this and the five-year-old *Earthworm Jim*. Old ideas are trotted out in their new clay disguises, with everything from 100 objects equating an extra life to hidden bonus stages taking a bow. The only concession to the five years between the two games is the large level.

For all its dated content, *Skull Monkeys* is still more than playable. It relies on its speed to cover any lack of substance and the initial urge to explore is strong. Sadly, prolonged play reveals deficiencies, and the fart gags and childish humour start to grate. Perhaps for the younger game player, *Skull Monkeys* is a novel take on an old idea, but a curate's egg nonetheless.

Edge rating:

Seven out of ten







Format: **PlayStation** Publisher: **EA** Developer: **DreamWorks Interactive** Price: **£40** Release: **Out now**

Sega **Touring** Car Championship

Sega PC's conversions of *Sega Touring Car Championship* and *Sega Rally* are equally disappointing for the knowledgable gaming purist – but for distinctly different reasons. *Rally*'s failings are those of its PC development team, yet blame for *Touring Car's* flaws must lie with original arcade developer AM Annex.

Admirable as a demonstration of Sega's growing PC prowess, *STCC* sadly highlights the mediocrity of its cabinet-based cousin – bereft of force feedback, steering wheel and other such standard arcade paraphernalia, it's a shallow and comparatively lifeless experience for the solitary player.

While *Sega Rally* was influential and innovative, *Touring Car* was always a derivative size-3 retread of *Rally*'s pioneering size-12 footsteps. The similarities between the two titles are numerous, with direct comparisons always finding a jury's verdict in favour of *Rally*. In the crowded PC marketplace, *Touring Car's* shortcomings are rather more apparent.

As a oneplayer game, *Touring Car* is easily completed and relatively simple to master. Fortunately, the option to play LAN and Internet sessions with a full field of players is as enjoyable as the arcade version's fourplayer link-up. Though not in the same league as the original *Daytona*, racing against human competitors is infinitely preferable alternative to the lack of challenge offered by the mechanical AI racers. But, with the likes of Kalisto's *Ultimate Race* sequel, Virgin's *Screamer Rally* and CodeMasters' *TOCA* all offering extensive multiplayer and solo options, it's hard to imagine PC owners buying *Touring Car* for this reason alone.

Edge rating:

Five out of ten



Format: **PC** Publisher: **Sega** Developer: **AM2** Price: **£30** Release: **Out now**

Last **Bronx**

While other publishers and developers regard support for accelerator boards as a prerequisite, Sega's apparent ignorance of the fast-growing PC3D market becomes ever more inexplicable. *Last Bronx* underlines its need to address this problem. Despite it being Sega's most accomplished conversion to date, *Bronx's* software-only engine makes it a viable purchase for the high-spec PC owner alone – an undesirable state of affairs for a publisher wishing to further establish itself in an increasingly competitive market.

With options for 'true' 3D backdrops and character models identical to the arcade original, *Last Bronx* earns the moniker 'arcade perfect' by being just that. Its options, however, are largely dedicated to ensuring an adequate representation will run on a less powerful PC – a curious irony, given that adequate acceleration support could render many compromises unnecessary.

Last Bronx supports network and Internet play, boosting its appeal considerably. The transition from arcade to home is often unkind to the beat 'em up genre, with fewer competitors available in a domestic environment. The prospect of Net-based tournaments is one area in which the PC currently holds a considerable advantage: the accomplished Saturn version, with inferior visuals and no online or LAN capability, makes a poor cousin by comparison.

Ultimately, *Last Bronx* will be judged by many consumers with its hardware demands in mind – purists and casual buyers alike will baulk at the inadequacies of its low-res mode.

Unless Sega releases a much-needed 3D card patch, this excellent port could slip into obscurity – with only a select few wealthy PC owners wise to its considerable merits.

Edge rating:

Eight out of ten



Format: **PC** Publisher: **Sega** Developer: **AM2** Price: **£30** Release: **Out now**

Theme Hospital

Theme Park was already looking a bit rusty when Bullfrog rehashed it to create *Theme Hospital* last Spring. But is the dearth of similar titles on the PlayStation enough reason to repackage what's essentially an aging classic?

Just about. Graphically, *Theme Hospital* certainly looks its age, with sprites ported straight from the PC. But fashionable appearances count for little in contemporary medicine – George Clooney notwithstanding. Game mechanics are crucial, and here *Theme Hospital* remains equally true to its successful PC incarnation.

The player assumes the role of a hospital manager. With confidence in the NHS at low ebb, merely erecting what seems like a medical establishment is enough to lure in the local ill and decrepit. Their diseases are charismatic affairs, with bloated heads and invisibility taking the place of tuberculosis and strokes. The doctors attempt to diagnose the patients then send them elsewhere within the mushrooming hospital for treatment. If the ill look like punters milling around a fairground, that's hardly a coincidence.

As would be expected, where *Theme Hospital* falls short is on control. Bullfrog has created a useable interface, but without the easy interaction offered by a mouse, managing the hospital becomes increasingly difficult as complexity grows. For cerebral gamers without a PC, though, that will just have to be endured.

Edge rating:

Seven out of ten



Format: **PlayStation** Publisher: **EA** Developer: **Bullfrog** Price: **£40** Release: **March**

Art of **Fighting Twin**

Those with undamaged memory cells might remember *Art of Fighting* from the old SNES days. Though never a leader of the 16bit beat 'em up scene, it nevertheless provided competent fighting thrills and a playable alternative to the interminable *Street Fighter* series of the time.

This N64 adaptation follows in its predecessor's combat steps, yet despite its typically Japanese flair, it fails to captivate the player in the same way as its ancestor. Eight fighters are available and represent the usual variety of characters, including the obligatory wrestler type. As is usually the case with Eastern fighting games, *Art of Fighting* features a Super Deformed mode in addition to the more anatomically correct option.

Unlike previous N64 contenders, though, the action moves along at a healthy pace and each of the well-animated protagonists possesses a decent fighting repertoire. However, despite the occasional impressive special move (much in the *SF* vein), the graphics are generally unimpressive, with visually unimaginative characters and bland backgrounds.

The oneplayer mode is unlikely to take too long to complete, but adding another joypad does wonders for the game's longevity, and anyone with a decent working knowledge of Japanese can always indulge in the story mode.

Yet, *Art of Fighting's* biggest problem is to have arrived at the same time as the significantly superior *Fighters Destiny* (see p94), which immediately prevents it from scoring any higher.

Edge rating:

Six out of ten







Format: **Nintendo 64** Publisher: **Culture Brain** Developer: **In-house** Price: **¥6980 (£35)** Release: **Out now (Japan)**

NHL '98

Electronic Arts' decision to curtail all further Saturn development, with immediate effect, makes this current incarnation of its successful NHL franchise the last to appear on Sega's beleaguered 32bit format. Strangely, while other console and PC owners are recognising *NHL '98* as the best hockey sim available, many Saturn owners are unlikely to mourn the loss of the series.

It's hard to pinpoint individual features that reduce the impact and playability of this Saturn version, but it's immediately apparent that as a conversion it's an inferior port of the excellent PlayStation game. Sega's machine has a long history of poor thirdparty conversions, many of a standard well below *NHL '98*. But the traditional hallmarks of a comparatively lower development expenditure are almost embarrassingly apparent. Murky textures, grimy colour usage and a lower frame rate are risible flaws, while those familiar with other versions will find gameplay comparisons unfavourable for this Saturn adaptation. The confusing and allegedly lower-powered architecture of Sega's machine has long been cited as a reason for poor conversions. But, as owners of the format will attest, Sega's own games suggest an entirely different explanation is in order.

With Virgin's excellent *NHL Powerplay* available at the budget price-point of £20 – and the Saturn version regarded as the best of all – Edge finds it hard to recommend this distinctly lo-fi conversion.

Edge rating:

Six out of ten



Format: **Saturn** Publisher: **EA** Developer: **In-house** Price: **£40** Release: **Out now**

Snow Break

Not so long ago, players wishing to indulge in some polygonal snowboarding antics would be lucky to find anything other than *Cool Boarders* on the PlayStation. Now several titles already exist, with good and not-so-good examples appearing almost weekly.

Snow Break belongs to the latter group. After choosing one of four characters (two snowboarders, two skiers), players enter a championship incorporating four courses. These are particularly dull with little or no imaginative touches and manage to feature a quantity of clichés rarely seen in a videogame.

More importantly, control of the characters is awkward and the slightest contact with any of the other two contestants often results in a tumble and subsequent frustrating loss of time. Furthermore, the camera sticks to the character so rigidly that any bump or angled bank results is instantaneously reflected by the viewpoint, resulting in a very disorientating ride.

Ultimately, Atlus has developed a substantially flawed game with little appeal, and one that will only excite the most ardent and desperate snow sports fan.

Edge rating:

Four out of ten





Format: **PlayStation** Publisher: **SCEI** Developer: **Atlus** Price: **¥5,800 (£30)** Release: **Out now (Japan)**

Actua Ice Hockey

The forthcoming Winter Olympics have brought with them a host of snow-related games hoping to cash in on the hype surrounding this major sporting event. After Konami's disappointing use of the licence, there were fears that any other licensed product might rely solely on the strength of the Olympic logo in order to sell copies, as is sadly so often the case.

As the only hockey game to sport the five Olympic rings on its box, Gremlin's *Actua Hockey* could easily have opted for such an easy, yet condemnable, route. Instead, Gremlin has put a lot of effort into this title and come up with a very competent and playable simulation of this ice-bound, hard-hitting sport.

Visually, the proceedings look impressive with motion-captured players skating convincingly within the rink. They feel right too, both in terms of 'weight' and the laws of inertia that govern this type of sport.

Every international team is featured and players can decide between the usual championship and exhibition options available, before hitting the ice. The stadia themselves are fairly convincing, although in terms of presentation, PlayStation *NHL '98* is still superior. The commentary, too, although adequate, has a tendency to repeat more often than its competitors, and for most of the time the overall atmosphere is slightly subdued when put against EA's offering. This is true until a goal is scored, resulting in the entire stadium erupting into a kaleidoscope of colours and exuberant crowd noise – by comparison, getting the puck to the back of the net in *NHL '98* feels rather unrewarding.

Edge rating:

Seven out of ten



Format: **PC** Publisher: **Gremlin** Developer: **In-house** Price: **£30** Release: **Out now**

Alone in the Dark

Capcom's *Resident Evil* series refined the 3D horror adventure, but the genre was originally showcased by the *Alone In The Dark* games half a decade earlier





Aside from the amount of polygons used, the stylistic distance between *Alone In The Dark* and *Resident Evil* is surprisingly narrow

Before Infogrames introduced PC gamers to the adventures of Edward Carnby, the idea of a horror-influenced computer game was, if not unprecedented, one that had not been thoroughly developed. Arcade and adventure games had flirted with familiar icons from classic movies and literature, but it took *Alone In The Dark* to evoke the fear and spine-tingling spookiness of the genre. Here was a game where even the quiet moments were tense. Foreboding locations set within and around a haunted mansion, ghoulish set pieces and monsters that just didn't know when to die all made this a deliciously otherworldly HP Lovecraft-inspired yarn.

Crucial to the sense of high drama was a 3D engine of some power, with superbly animated characters travelling through equally solid locations, often viewed from the most outlandish static camera views. This appreciation for cinematic tricks was epitomised by the use of cut-away scenes to herald the arrival of monsters.

The use of realtime 3D, viewed from a thirdperson perspective, also ensured the adventure remained fully interactive. Players steered Carnby using a unique rotational control system, and fought the collection of creatures with weapons as well as fists. The actual combat provided the only real flaw, with one mistake in timing often leading to death – a problem that also blighted *Alone In The Dark 2*, a technically superior though obviously less innovative sequel. Indeed, by the third instalment – the Wild West-flavoured *Alone in the Dark 3* – the puzzles had become all too hard, and the series was clearly running out of steam.

Although visually primitive by today's standards, it's surprising how effective the *Alone In The Dark* games remain when it comes to evoking that sense of dread. It seems there's really not such a great difference between Infogrames' classics and the *Resident Evil* series after all. E

Publisher: Infogrames	1993	No 25
Developer: In-house	PC	

Ultima Collection

As *Ultima Online* changes the face of Internet gaming, Origin provides a timely reminder of where it all began.

This gathering of the first eight titles in Origin's *Ultima* series is practically a history lesson of the roleplaying genre as a whole. Only the *Wizardry* series could be argued to have wielded as much influence over the genre's development. There have been two successful forays into 3D realtime RPGs (with *Ultima Underworld 1* and *2*), and of course the latest Internet venture *Ultima Online*, but it's the core series that has really built up the legend of Britannia and its host (and alter ego of the games' author Richard Garriott), Lord British.

Ultima Collection gathers together ten titles from the series, covering episodes one to eight (including both editions of episode seven, and add-on disks *Silver Seed* and *Forge Of Virtue*) and adding Alkabeth, effectively *Ultima 0*, for good measure. In truth, the first half of the package is of little use, for while the game designs are sound enough, presentation and character interaction is best described as basic – the code has been left untouched despite the repackaging. Even *Ultimas V* and *VI* are graphically very primitive, though highly rewarding if such concerns are ignored. These games possess a richness and diversity in world design – and integration of random encounters and plot narrative in advance of most contemporary efforts. But it's only really the final episodes in the collection that successfully combine high presentation value with that fabled *Ultima* depth, benefitting from a switch to mouse control and graphics that slip the confines of tile-based design.

That the package also includes new interview footage with Garriott and a 16-page atlas is a good indication of who the *Ultima Collection* is aimed at. It undoubtedly provides a fascinating history lesson for the die-hard fans, but inevitably most roleplaying gamers are only likely to discover a fraction of its secrets. More is the pity. E

Format:	PC
Publisher:	EA/Origin
Developer:	Origin
Release:	Out now
Origin:	US





The first looks like a shareware effort (above right), but later instalments (above left, top) added finer visuals to the package

Konami's Cobra board raises its head for a second strike, this time in the racing arena

Racing Jam











Despite boasting some impressive visual features, *Racing Jam*'s easier tracks fail to excite players in the same way past arcade titles have. The night course (above), though technically sound, is a dull experience

The variety of vehicles and the attention to detail is commendable for an arcade title, but players expecting Western models will be disappointed

Developer:	Konami
Release:	Out now
Origin:	Japan

After a series of anticipation-building exercises, the Cobra version of Konami's *Racing Jam* has finally made an appearance in Japanese arcades, surprising many a gamer in the process. Until recently, the world's press had only been permitted glimpses of the title in the form of running video footage and a lower-end Hornet-based version that has, in fact, not been released. However, as well as hitting Japanese streets, the Cobra version of the game also made an appearance at the recent ATEI show (see p10) in its dual cabinet form – a sit down version boasting a large curved rear projection screen and a smaller, more affordable twin cabinet with standard television screens.

Ironically, the display on the standard cathode ray tube screens was the most impressive, boasting superior contrast. Yet the visible performance was significantly lower than in the demo seen at last year's JAMMA show (and on CD1, **E**47) leading delegates to suggest that Konami's first version of its Cobra technology falls short of fulfilling its potential.

Nevertheless, players will be pleased at the choice of vehicles – a staggering 24 are on offer, making *Racing Jam* the *Gran Turismo* of the arcades. The number of tracks, too, is commendable. Four different modes are proposed, with differing difficulty levels: Time Trial and Circuit Course racing (beginners and intermediate),



***Racing Jam*'s larger cabinet includes an unusual curved screen**







Unfortunately, the realism displayed by the car models has not been extended to the physics. The handling although mostly adequate, compares poorly against rivals



The Gymkhana sections are highly enjoyable, particularly with an open track, giving players free roam of it, with several possible consequences

uphill and downhill versions of Winding Road (expert), and several Gymkhana Racing modes. The latter proves to be the game's best option, set on a race track in which players must follow a predetermined route lined with traffic cones as quickly as they can whilst staying on the track and knocking over as few of the cones as possible. Three difficulty levels and a highly enjoyable practice mode are available, with the latter opening up all of the circuit, enabling players to experiment within a relatively generous time limit.

Another *GT*-esque touch is the facility to upgrade engine power and suspension, which Konami has complemented with a handbrake as seen in *GTi Club*. Sadly, the handling hasn't the same finesse and the early tracks, even with some very technical open road sections, are fairly unexciting. This is a shame, because as a hybrid of arcade and consumer software, *Racing Jam* held the potential to revolutionise the current coin-op racing genre.





The replay is one of the game's more impressive features, with dynamic multi-angled views



Some of the later tracks offer beautiful scenery, although some sections aren't as realistic, and therefore as convincing, as *Sega Rally 2*'s, for example. Speed isn't a problem, however





Players at home with the art of powersliding should easily master *Jam*'s manual controls

Magical mayhem abounds in Acclaim's first proprietary technology coin-op

Armageddon



The character detail and design are both admirable. Acclaim's Californian development team has built a game that is clearly designed to be a gratifying multiplayer experience





Action is confined to raised platforms, around which teleport points are located



***Armageddon* boasts old-school-style gameplay – a breath of fresh air in the stale arcade market**

One of the most innovative new arcade titles at London's January ATEI show, *Armageddon* is part of the Acclaim's pincer assault on the coin-op market. The game runs on dedicated hardware based around MIPS 64-bit RISC processors and the Voodoo chipset, as opposed to Acclaim's 'Arcade' titles, which are PCs in drag.

Players use trackballs to control opposing magicians, battling via direct shots, or by building monsters which then attack their adversaries. Unusually, the characters are not moved around the game's arena directly – instead an icon is placed where creatures or shots are required. Characters can be moved around the play area, but only through teleporting between seven fixed points. Each of the seven protagonists (two of which are hidden to begin with) has seven monsters whose power is proportional to the length of their gestation period – however, the process of creating creatures leaves the player vulnerable to blasts from their enemy.

Armageddon's play system proves accessible and compelling. Finding the right balance between blasting the opposition and creating more lethal fiends is enjoyably frantic. Positive first steps indeed...



While not quite high-end, *Armageddon*'s Voodoo-assisted graphics are reassuringly detailed. It's reminiscent of past Atari titles, although that 's partly due to the trackball...



Developer:	Acclaim
Release:	TBA (UK)
Origin:	US

Gallery

Stunning, fantastical landscapes and character designs may be common videogaming motifs, but CGI is affording artists greater creative freedom













Rich in detail, depth and drama, these images from Bullfrog's *Populous: The Third Coming* belie the relatively low-end equipment used to render them. The skewed camera angles employed by artist John Miles create a far greater sense of occasion than more conventional compositions. **Edge** has seen few pre-rendered visuals that sell a videogame as well as this

Images rendered by Bullfrog's John Miles using 3DS Max 1.2 running on a P166 with 128Mb RAM





Unusually, these stunning images originate from Poland (hardly a hotbed of gaming talent) and are taken from *Reah*, an adventure game from the same mould as Broderbund's *Myst*. Designed to run at a relatively swift pace, even on low-end PCs, *Reah* features some dramatic environments.

Images created by developer LK Avalon using 3DS 4.0 on PC









Electronic Arts' new strategy title *Dark Omen* (also seen in video format on **Edge**'s CD4, issue 54) features an impressive level of detail in its characters and environments. Designed to convey much of the black humour found in such fantasy titles, these grim individuals have an almost hand-painted quality. See page 101 for the review.

Images created in-house at EA using SGI machines running Softimage







DEVELOP

VIDEOGAME CREATION UNDER THE MICROSCOPE

Yaroze: let the games commence

Competition

As mentioned in E54, SCEE is currently running a Net Yaroze programming competition in association with Edge. The first prize is a Sony DSC-F1 Digital Still Camera, the second a Sony MZ-R30 MiniDisc Walkman and the third a Sony SRS-GS70 Shoulder Speaker System. Entrants are invited to submit an original Net Yaroze game which will be judged on both creative and technical merits. The closing date is March 12, 1998. For more information see E54 or go to www.scee.sony.co.uk /news/edge. Alternatively, write to the following address for an application form:

Net Yaroze 1st Anniversary Competition
SCEE
Waverly House
7-12 Noel Street
London W1V 4HH

Note: Net Yaroze kit has to be ordered directly from Sony Computer Entertainment. For information on how to become a Net Yaroze member phone 0171 447 1616 or register at www.scee.sony.co.uk

Also as a celebration of the launch of the European PlayStation website, www.playstation-europe.com, SCEE is offering 500 Yaroze on a first come first served basis, at a discounted price of £350

Over the last year, Yaroze has picked up a substantial amount of publicity, both in dedicated videogame mags and the mainstream media. But those who have only skimmed articles praising Sony's programmable console may well have formed the impression that anyone can just plug it into their PC and have a Ridge Racer clone running in a couple of days. Sony, of course, is keen to stress the user-friendliness of the system, and there are packages – like *CodeWarrior*, for example – which promise to make the whole process of game development a lot simpler. However, the only people truly qualified to judge the technology are those who are actually using it.

At the moment, those people certainly seem to fall much more into the 'veteran coder' than 'curious newcomer' category. 'I got a sound grasp of computer architecture and C/C++ at university studying for my computer science degree,' points out **James Shaughnessy**, reflecting the experience of many who have bought into the Yaroze program. **James Rutherford** gives another familiar response, 'I have always had an interest in games programming, ever since the early days of the Spectrum, and thought this was a good way to learn.' Indeed, these experienced computer users feel that a few naive videogame players may be slightly out of their depth with Yaroze. As Shaughnessy puts it:

'It seems that people with little knowledge of programming thought, "Yeah, *Tomb Raider*, *Tekken*, *V-Rally* – dead easy!" So they bought a black PlayStation thinking it would be as simple as when they wrote BASIC programs on the C64. Only when they get the system set up do they realise that they know practically nothing about C. In the end, they try messing around with some example programs and then eventually give up.'

So how difficult is it to start developing games on the Yaroze? James Rutherford, who cut his programming teeth using Amiga AMOS and studied C prior to using Yaroze, admits he found it tough going initially: 'C wasn't too hard to grasp, but it took a long time for me to figure out how to get bitmap screen effects (quite a simple task). I like figuring things out for myself, so I hack away – I remember feeling elated when I realised I could get any feedback at all from my machine (a simple pad reading routine).'

Meanwhile, others who mastered the basics quickly encountered problems later on. 'Yaroze was no more difficult to learn how to use than any other API' claims **Graeme Evans**, 'what I have trouble in is the bigger stuff that no one talks about; the best ways to format data for converting into 3D objects and stuff. That sort of fear stops me from writing code.'

However, there seems to be a general agreement that



Net Yaroze game *Gravitation*, by James Shaughnessy, is a homage to the 8bit classic *Thrust* – a timeless concept

programming for Yaroze is a much easier and more realistic means of gaining game development experience then tackling the mighty PC. 'Its a cliche to say that the days of the bedroom programmer are over' admits Shaughnessy, 'but since the PC took over the computing mass market from the 8- and 16bit machines it has been true. The Yaroze, however, returns to the "old skool" hardware structure; a basic memory map, separate video and sound RAM, all with fixed addresses – there is no need to worry about relocation and multi-tasking with other third party programs. Also, everyone has the same hardware spec, so you know your game will run the same on everyone else's machines.'

Even more encouragingly, Shaughnessy asserts that extensive programming knowledge and experience may not be quite as valuable as enthusiasm and dedication, 'Of course you don't have to know anything about C to begin learning, but you have to be prepared to put the effort in, and you'll eventually have to know it very well to make your own games'.

For those learners who do take the plunge, there is of course the Yaroze website to turn to. Here, Sony help staff – along with plenty of altruistic Yaroze veterans – are on hand to answer queries and proffer sample code. But how useful is this area of the WWW? Most opinion is positive.

'The newsgroup feature of the Net Yaroze package is priceless to the programming newcomer' Shaughnessy confirms, 'It offers invaluable help to those who have simple query or cannot sort out a programming bug or problem. There are support staff on hand to explain things if you get in a pickle, and there's a lot of help and advice from other Yaroze members too'. Indeed, it is the collaborative essence of the website and accompanying news groups which seem to impress users the most. As Evans points out, 'The website has a lot of code to snarf. Plus I love fanzines, so the members' home pages are fun to keep up with.'

There are some reservations, though. A few users **Edge** spoke to felt that Sony could be less than forthcoming with some aspects of PlayStation programming ('especially stuff they think might count as a trade secret,' elaborates Rutherford), and many of the members pages are in various states of disrepair. Nevertheless, the general consensus is that if users know where to look then they'll find answers to most of their questions, eventually. Which more or less sums up the internet in general.

Whatever difficulties Net Yaroze members face, the amateur development community is proving both creative and productive. Everyone **Edge** spoke to has a demo nearing completion, ranging from experiments like James Rutherford's light synthesizer, to full games such as Shaughnessy's *Gravitation* – a version of the 8bit classic *Thrust*. Net Yaroze has its irritations (confusing documentation, erratic online assistance), but users who have the patience both to persevere with their own equipment, and to search the website for programming tips, have very few complaints. Except Evans. When **Edge** asked what he had managed to do with Yaroze he replied, 'run up £100 a quarter phone bills checking the newsgroups'. So, to paraphrase 'Live and Kicking', make sure you check with whoever pays the bills before embarking on an amateur programming career. E

Places to visit:

Damaged Cybernetics http://www.futureone.com/~damaged/
Jeff Frohwein's Game Boy Tech Page http://www.sy.net/~jfrohwei/gameboy/
BamBam on the Net http://www.universal.nl/users/magic/
Sony Europe http://www.scee.sony.co.uk/

Splitting the globe

Staggered release dates; mutually incompatible systems; slow, letterboxed games. All facts of videogaming life that have a long and dishonourable history. Almost universally – and since the dawn of videogaming – console manufacturers have attempted to make life difficult for those who sought to break down the seemingly-arbitrary barriers that segregate Japan, America and the rest of the world. And if many industry pundits are correct, soon even the PC software market will be pressed into conformity.

'Territorial lockout' serves several purposes. Firstly, it separates 50Hz PAL and 60Hz NTSC regions, enabling publishers to release versions of games that are tailored for each. The theory behind this is sound; the games can be tweaked to operate at the correct speed and screen height, and to avoid potential glitches caused by the differing clock rate (the latter of which would lead consumers to cry foul). Some systems are more vulnerable to game glitches than others – the Saturn has a reputation for rejecting software that deviates from the correct speed while the N64 is, so far, a model of equanimity.

Secondly, by dividing the market into smaller sections, publishers can focus their marketing efforts on one region at a time, with a concomitant decrease in risk. If a product bombs, they can perform a post mortem in order to ascertain its suitability for release elsewhere. They might choose to alter the game in order to broaden its appeal in other regions, a tactic that can have beneficial effects on a title which ostensibly needs no work at all – *Gran Turismo*, which is receiving a musical makeover in time for its European release, is a case in point.

Thirdly, producing different versions enables publishers to tailor games for the prevailing moral climate in certain regions, or to avoid flouting the law – especially if the games feature 'adult' themes or explicit violence. For example, the copious bloodletting in the Japanese version of *Samurai Spirits 3* was excised prior to its release in the US and UK. Furthermore, titles that include video footage may have to obtain film-style certification before release.

Finally, in some cases the lockout also acts as an anti-piracy system – particularly in the case of Nintendo's cartridge-based games, where the potential pirate's task is complicated not only by the need to duplicate the ROMs, but also the custom-made security chip. Even once this has been duplicated, the copied cartridge will still only work in one region.

These lockout systems can be implemented in various ways, depending on the type of hardware involved. A traditional approach on cartridge-based systems is to make the cartridges themselves physically incompatible with all bar one type of machine. Nintendo has always favoured security chips, fitted to the cartridge, which communicate with a similar chip in the console using 4 pins on the connector. If the codes sent by the cartridge chip match those in the console's chip, then the game is allowed to run. Nintendo has used this simple expedient in all its consoles, from the NES to the N64, with the notable exception of the Gameboy. The option of hardware lockout is not available, however, to CD-based consoles, and so they are forced to utilise software only solutions in which the game checks the speed or country code of the machine it is running on – a system that Nintendo has recently taken up as another line of defence against piracy. For the PlayStation, Sony implemented the same system in reverse; the boot ROM in the console checks a code written on the disc and refuses to proceed if the code doesn't match.

The companies involved in the practice argue that lockout systems protect consumers from faulty games and pirates. Many videogamers, particularly the more dedicated members of the fraternity, see territorial lockouts as an infringement of their right to buy and play import titles – whether their motivation is to get the newest games before everybody else, or to play ones that may never be released in their own country (a particular issue in the UK, which has missed out on classics including Square's *Final Fantasy III* and *Chrono Trigger*). Or they may be exercising their desire to play games at the speed the designers intended, without ugly borders. Needless to say, this created a market for third party devices – following a precedent set by the infamous SNES Universal Adapters – that override the lockout. Owners of CD-based consoles are not so easily mollified, as their machines require internal modifications in order to beat the protection.

When a PlayStation's boot ROM reads the country code data, it switches the console into the correct mode to run the game; the display on a 50Hz PlayStation flickers when it is first turned on because the machine actually starts in 60Hz mode. Assuming it finds the correct country code data, the PAL ROM switches it down to 50Hz. Therefore games never glitch or crash due to incompatibilities, but always run at the expected speed. This allowed Sony, upon releasing the Yaroze, to remove the lockout system, allowing owners to play games from all territories, without fear of encountering technical problems.

Even the PC is not immune to difficulties arising from the multinational nature of the market. Most of these are genuine technical glitches, as opposed to deliberate corporate measures: games designed for versions of Windows that use double-byte characters, typically those in the Orient, may not function correctly on Western systems. While these problems are rare at the moment – mainly due to the lack of mainstream PC development in Japan – they will undoubtedly become more common as more companies initiate development on the PC platform.

The future of territorial lockout is uncertain. In the short term, no one is in any doubt that it will be an 'undocumented feature' in the next generation of consoles. But what then? By the time that generation's successors arrive there may well be at least the beginnings of a universal TV standard, removing the last technical barrier to world unification of the games market. The economic and marketing barriers will still exist, but if Internet commerce fulfils the potential for 'games on demand', even these may be eroded. On the other hand, some parties, such the Hollywood film industry (currently standing by the territorial lockout on DVD discs) may have sufficient muscle to ensure that each country stays in its own neatly-demarcated box.





Japanese software may be incomprehensible to the linguistically challenged (top), but unmodified consoles won't run it (above)



***Samurai Spirits*, subjected to an undignified bloodletting process prior to its release on the international market**

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